THE PRACTICE OF MAKING EU POLICIES WORK: IMPLEMENTATION PERFORMANCE, LOCAL GOVERNMENTS, AND AIR QUALITY

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1.

Introduction

1.1 INTRODUCTION

This thesis is about European Union (EU) policy implementation, or about how EU policies are put into practice. One can rightly ask whether enough has been written on this topic. Indeed, EU compliance research that has looked at how EU member states implement EU policies has been flourishing for years (Angelova et al., 2012; Mastenbroek, 2005; Thomann and Sager, 2017; Treib, 2014). Yet, some puzzles remain unaddressed. This introduction gives a brief overview of these puzzles and shows how this thesis addresses them. In order to do that, I first present three examples of implementing a specific EU directive on the ground: the Ambient Air Quality Directive 2008/50/EC (AAQ). These examples illustrate the challenging reality of implementing an EU directive. From these examples, three puzzles emerge, which lay the groundwork for this thesis. The second through fourth sections give a quick overview of how scholarly debate has addressed these three puzzles so far. The fifth section synthesizes the research puzzles, research questions and contributions. In the final section of this introduction, the research approach of this thesis is broken down into four specific studies that address the EU implementation research puzzles.

1.2 THE PRACTICE OF IMPLEMENTING EU AIR QUALITY POLICY: THREE PUZZLES

Already since 1980, the governments of the member states of the European Union (EU) have experienced pressure from non-governmental organisations and citizens to reduce unacceptable levels of air pollution. The United Kingdom (UK) is one of the member states that have battled severe air pollution for years (Thorsheim, 2006). Since 2005, environmental lawyers *ClientEarth* and various local governments have pressured the government to adopt more and stricter measures against air pollution in the UK in order to comply with the EU AAQ directive. Over the years, *ClientEarth* has successfully challenged the UK government in court (Covington et al., 2016; Pedersen, 2016; Scotford and Bowman, 2016). The recent judgment of the High Administrative Court, *ClientEarth (No3) vs SSEFRA, 2018*, again sided with environmental lawyers urging the government to take action at last. In addition, the UK local governments leading in air quality policy, though taking a less adversarial approach, have also systematically called upon the national government to step up its efforts in improving air quality (UK100, 2018). These leading local authorities have taken comprehensive measures like working locally in partnership to reduce emissions from industry, switching to zero-emission vehicles, pedestrianising town centres and getting more people out of their cars and onto their bikes or their feet (UK100, 2018). Yet, according to these local governments, more nationally coordinated action and funding are necessary to achieve the EU air quality targets (UK100, 2018).

Similarly, the German consumer protection organisation *Deutsche Umwelthilfe* has successfully challenged various German local administrations in state courts for their negligence to implement appropriate measures to meet the EU AAQ targets (*Deutsche Umwelthilfe*, 2018: 5). Recently, backed by environmental lawyers *ClientEarth*, *Deutsche Umwelthilfe* challenged local German administrations in the highest Federal Administrative Court to take more and more far-reaching measures in German cities in order to ensure compliance with the EU air quality directive (*Deutsche Umwelthilfe*, 2018). The lawyers targeted cities with levels of pollution so high that they are unlikely to be brought below AAQ targets without extra policy effort from the local authorities (*Deutsche Umwelthilfe*, 2018). The Federal Administrative Court's ruling was unambiguous: German local authorities have the power and the duty to ban diesel cars from the city to comply with EU AAQ targets and up until now their regulatory efforts have been insufficient (*Bundesverwaltungsgericht (BVerwG),* File number 7 C 26.16 and 7 C 30.17). Therefore, the Federal Administrative Court ruled that prolonging the inadequate regulatory practice to combat air pollution would be a breach of the local authorities' legal duty to protect the people of Germany against harmful air pollution.

In the Netherlands, environmental NGO *Milieudefensie* and a local civil society organisation called *Adem Rotterdam* challenged the national government in court in 2017 (*Deutsche Umwelthilfe,* 2018: 8; *Milieudefensie and Adem Rotterdam vs Ministry of Infrastructure and Environment, 2017*). They argued that not enough measures had been taken in order to protect the citizens from the health risks of air pollution. The two plaintiffs called for more national and local measures to combat air pollution. More importantly, they stressed the importance of going beyond EU AAQ targets and meeting the World Health Organisation guidelines, as these are stricter than EU ones. In the first instance, the court ruled that the government had not done enough to combat air pollution (*Milieudefensie and Adem Rotterdam vs Ministry of Infrastructure and Environment*, *2017*). However, when the matter was taken to the Higher Court, *Milieudefensie* and *Adem Rotterdam*, this time joined by 57 individual citizens from 13 cities, surprisingly lost. The Higher Court argued that the Dutch government together with local authorities were doing enough to combat air pollution and meet EU limit targets (*Milieudefensie, Adem Rotterdam and individual plaintiffs vs the Ministry of Infrastructure and Environment, 2017*).

These three examples of different national experiences with implementing EU AAQ policy lay bare at least three puzzles of EU compliance. First of all, the court cases demonstrate that while the AAQ directive remains vague on the definition of 'appropriate' measures, national courts are in the position to assess whether national and local authorities have made enough of an effort to combat air pollution. In the German and UK cases, national and local measures were not deemed comprehensive enough to combat air pollution. At the same time, the Dutch Higher Court ruled that the measures were appropriate. This means that the courts do not merely assess *whether there is a plan* to combat air pollution, in other words whether the implementers comply with the key procedural Article 23 of the AAQ directive

to have an AAQ management plan in place, but also examine *the contents of this plan*. Even though such an examination seems a self-evident thing to do, it is as yet unclear how we can establish which policy implementation plans and measures are more comprehensive than others.

Secondly, despite the fact that the European Commission holds national governments responsible for the effective implementation of EU policies, the national court cases demonstrate that to a large extent it is the *local governments* that determine how EU policies are implemented. For example, in May 2018, the European Commission referred the national governments of six member states to the Court of Justice of the European Union for failing to take appropriate measures to meet AAQ targets. The UK, German, and Dutch court cases demonstrate that even though the national governments are held accountable by the EU Commission for policy implementation, it is the local governments' efforts that, taken together, constitute implementation performance of a single member state. These legal actions signify the importance and urgency of examining *local policy efforts* to make EU policy work.

Finally, the court cases demonstrate that compliance with the EU air quality directive at the local level leaves much to be desired and that there is a great variety of implementation even within one member state, i.e. at the *local* level. The EU's central goals of creating a single European market and an equal quality of life across the EU, as well as the reaching of myriad policy-specific objectives, are undermined if EU policies do no take effect across the member states (Kaeding, 2008; Versluis, 2007). Yet, it is a public secret that "it would be a miracle if all member states' administrations were implementing most EU regulations, let alone directives, in even approximately the same way" (Shapiro, 1999: 29). What these court cases add to the discussion on the varied implementation of EU directives, is the observation of great intra-state implementation variety, i.e. different practices at the *local level*. Some local governments managed to comply with the limits while others were taken to court. Those who complied display a considerable difference in efforts as well. Thus, the question arises how we can understand these puzzling local differences in EU policy implementation.

In sum, the analysis of the court cases leaves us with three main puzzles: (1) what constitutes comprehensive policy implementation, (2) what do we know of local policy efforts to make EU policy work, and (3) how can we understand local differences in EU policy implementation. Having presented these puzzles, in the next sections I turn to the academic literature in search for guidance.

1.3 THE FIRST PUZZLE: CONCEPTUALISING EU COMPLIANCE

So far, the majority of research on EU compliance, however theoretically and methodologically advanced, has examined compliance in a rather one-sided fashion. That is, it primarily focused on one particular element of compliance: the *timeliness* or duration of EU transposition (Treib,

2014; Zhelyazkova and Torenvlied, 2011; Zhelyazkova, 2013). In addition to that, complete EU compliance also presupposes *correct* compliance (Börzel, 2003: 60), which has been primarily defined as the congruence of implementation with EU legal obligations (Hartlapp and Falkner, 2009). Hence, the dependent variable of habitual compliance research is understood in terms of goal-achievement within the temporal and substantive limits set by the directive. In that case, compliance is typically juxtaposed to non-compliance (Zhelyazkova, 2013; Zhelyazkova and Torenvlied, 2011; Winter, 2006). This dichotomous understanding of correct compliance is problematic as it is too narrow to capture the differences in practical implementation of EU directives (Bondarouk and Mastenbroek, 2018).

First of all, the problem of using compliance and non-compliance "[in terms of] goal-achievement as the dependent variable of implementation research is that such goals can be difficult to operationalize" (Winter, 2006: 159). EU directives do not always contain a clear substantive target value against which implementation can be evaluated (Bondarouk and Mastenbroek, 2018; Dimitrova and Steunenberg, 2000: 215). This ambiguity in goals is not unique to EU directives. Winter (2006:159) points out that "much has already been written in the implementation and evaluation literatures about the vagueness and ambiguity of policy goals and the difference between official and latent goals". Hence, a categorisation into compliant or non-compliant implementation is difficult.

Second, a dichotomous understanding of the concept of correct compliance masks the possible variance in policy responses in the many cases that EU directives leave discretion to the member states (Bondarouk and Mastenbroek, 2018; Bondarouk and Liefferink, 2017; Hartlapp and Falkner, 2009; Thomann and Sager, 2017). In many cases the implementation of an EU directive can be seen as 'customisation' of domestic policies to the regulatory boundaries provided by the directive (Thomann, 2015). Therefore, a dichotomous understanding of compliance does not do justice to the broad spectrum of different implementation practices in response to legislation (Hupe, 2014; Hupe et al., 2014; Winter, 2006, 2012).

This variance in practical implementation is especially pertinent to grasp and analyse considering the increasing usage of procedural provisions in EU directives (Börzel, 2003; Knill and Lenschow, 2004; Scott, 2000). In contrast to substantive provisions, which are used to directly affect the production, distribution and consumption of goods and services, procedural provisions are designed to indirectly affect the desired policy outcome through the manipulation of policy processes (Howlett, 2000, 2011). However, a mere examination of *whether* a plan has been implemented, like in the case of AAQ action plans, masks potentially great variance in policy responses between several implementing authorities. Even more so, the court cases in air quality policy in different member states demonstrate that courts have not only paid attention to *whether* an action plan is in place, but also to the content of this plan. Hence, while there is an empirical necessity to understand this variation in implementation, the conceptualisation of the dependent variable of compliance in EU compliance research does not offer tools to do that.

Summing up, the rather dichotomous understanding of correct compliance used in EU compliance research so far does not provide enough guidance on how to capture variance in practical implementation in the member states, and therefore impedes deeper understanding of EU compliance and examination of "to what extent do member states make EU policies work" (Haverland and Romeijn, 2007). Therefore, the first puzzle of how we can establish the comprehensiveness of policy implementation is yet to be addressed in the literature.

1.4 THE SECOND PUZZLE: EU COMPLIANCE AND LOCAL GOVERNMENTS

The next puzzle that emerges from the national court case examples is what do we actually know of *local* policy efforts to make EU policy work. So far, the academic literature on EU implementation has mostly focused on member states' implementation of directives (Treib, 2014; Thomann and Sager, 2017). Scholars have shown that implementation of directives goes through different stages. The first stage in implementation, transposition, refers to 'legal or formal implementation' (Versluis, 2007), where the EU directive has to be anchored in the national law. Transposition is considered to be a decisive phase in the process of EU implementation, as most directives leave certain discretion to the national policy makers (Haverland and Romeijn, 2007; Treib, 2014). This stage, so far, is also regarded as a key stage for determining whether member states deviate from the EU policies (Haverland and Romeijn, 2007). It has therefore been the primary focus of research into EU compliance (for literature reviews see Angelova et al., 2012; Treib, 2014).

The subsequent stage of EU implementation is application or 'practical implementation' (Versluis, 2007). The application phase involves different administrative levels and actors when compared to the transposition phase: not only ministries and parliament, but also, for instance, sub-national authorities (SNAs) and a wide range of societal actors. SNAs are often responsible for operationalizing the national policy for practical purposes, especially in the case of environmental policy (cf. Borghetto and Franchino, 2010; Fleurke and Willemse, 2006). This happens by translating the policy into tangible tasks and assigning these tasks to specific implementers. Further elaborations have to be made and interpretations specified in the process of developing policy guidelines and implementation plans, before the SNAs can apply and enforce the actual policy.

However, more often than not, scholars have limited the analysis of EU implementation to the first stage and thus to national authorities' efforts in complying with EU directives (Mastenbroek, 2005; Thomann and Sager, 2017; Toshkov, 2011; Treib, 2014). EU implementation research often treats transposition as an end result in the compliance process, while in reality compliance is a continuous process which does not halt after directives have been transposed into national law (Breeman and Zwaan, 2009; Liefferink et al., 2011). Moreover, transposition is not a necessary condition for compliance: Bondarouk and Liefferink (2017) showed that some

local governments commenced making AAQ plans *before* the transposition deadline of the AAQ directive that obliges them to do so. Versluis (2007: 50-51) argued that just as in the case of national policy implementation, there is a difference between the transposed "law in the books" and the "law in action". Hence, the analysis of the transposition phase of EU directives should be accompanied with an analysis of their practical implementation.

Zooming in on the actors that put "law in action", local governments hold a unique position in the EU multi-level implementation structure. While tasked with EU policy implementation, local governments have limited opportunities to directly shape EU policies in Brussels (Goldsmith, 2005: 240; Ladrech, 2010; Panara, 2015; Van Bever et al., 2011:19). Yet, almost sixty percent of the decisions taken by local governments are influenced by EU legislation (CEMR, 2016). Consequently, local governments often find themselves 'sandwiched' between the pressure of higher authority to implement EU legislation dutifully (Goldsmith, 2005: 240), and accountability to local constituencies, whose local preferences do not always align with EU objectives (Bondarouk et al., 2019).

Accommodating different interests in the implementation process is not the only challenge local governments face when dealing with EU policies. In contrast to policy-specific implementing agencies (see Versluis 2007; Versluis and Tarr, 2013), local governments have to coherently implement a great variety of policies at the same time. This means that a local policy has to be compliant with for example sustainability policy, but also state-aid policy, and public procurement rules. In a recent public consultation organized by the EU Commission (2015), subnational governments indicated that while EU objectives on paper are often complementary, in practice many EU level initiatives are mutually incompatible and fragmented. As there is no EU guidance on how to deal with these policy incompatibilities, local governments are presented with a challenge. They have to decide which policies take precedence while keeping an eye on possible infringement proceedings if one of the policies is not implemented correctly. Hence, local governments are an important link in determining how EU policies look like on the ground, and deserve closer scholarly attention.

The EU implementation literature, in sum, provides signals that a mere focus on the level of the national authorities is not sufficient for determining to what extent member states make EU policies work (cf Thomann and Sager, 2017). Local governments emerge as political arenas where EU policies are being shaped on the ground. Yet, there has been very little attention to these local actors in EU compliance research (Loefgren, 2015). Hence, while the UK, German, and Dutch court cases illustrate the importance of focusing on local government implementation of EU policy, EU compliance research is yet to take a closer look at local governments.

1.5 THE THIRD PUZZLE: EXPLAINING DIFFERENCES IN IMPLEMENTATION

The final puzzle that emerged from the national court case examples is how we can explain variance in implementation performance between local implementers. This should be distinguished from the question why member states differ in their compliance with EU directives, which is the core question of EU compliance research (Treib, 2014). National differences in EU compliance have been examined in different policy sectors, using different methodologies and testing various theoretical assumptions (for literature reviews see Angelova et al., 2012; Mastenbroek, 2005; Treib, 2014). A single look at the literature on EU environmental leaders and laggards in EU policy implementation already reveals a vast knowledge acquired in studying national differences as a response to EU policy (e.g. Börzel, 2000; Bursens, 2002; Liefferink et al., 2009; Liefferink et al., 2011; Liefferink and Wurzel, 2017).

Yet, this systematic scholarly attention to differences between member states does not encompass studying differences in EU practical implementation (Treib, 2014). As a reason for this lack of research interest, Hartlapp and Falkner (2009) point to the challenges of acquiring data on practical implementation of EU policies. Hence, it is also not surprising that research into reasons for differences at local implementation of EU policies is limited. Nevertheless, an analysis of these local differences is highly overdue. In the EU Commission's public consultation (2015), subnational governments expressed the urgency of understanding why some local authorities excel in implementing EU policies while others do a bare minimum. This need for understanding what facilitates best practices in EU policy implementation comes from an urge to understand how local governments can best tackle global problems that EU policies set out to solve.

In search of causes for the way policy is implemented, implementation research has come up "with three hundred critical variables" (Hupe, 2014: 167; see also O'Toole, 2017: 377). Additionally, implementation research has been infamous for its highly descriptive studies and ad-hoc explanations (Hupe, 2014: 167; Hupe and Saetren, 2015; O'Toole, 2017: 377; Saetren, 2005; Smith and Larimer, 2009: 16). In his review of implementation research O'Toole (1986: 189) argued that "there has been very little conscious efforts to develop and test systematically the insights generated in previous work, and thus to separate the promising from the merely plausible but unproductive". Instead implementation scholars have been focussing on constructing the 'holy grail' of a general implementation theory by adding yet another critical explanation to the long list of critical variables (Hupe and Saetren, 2015; O'Toole, 2017; Saetren, 2005, 2014; Toshkov, 2011; Winter 2006, 2012). Thus, while the implementation research field is vast, its "highly fragmented nature is not very conducive to implementation theory accumulation" (Hupe, 2014: 167; see also Saetren, 2005; Winter, 2006: 164), which impedes theoretical and empirical progress in the field.

This unsatisfactory situation triggered a plea for a new generation of implementation research, the so called third-generation implementation research, premised on the notion

"that more rigorous scientific research designs were the crucial step towards further theoretical progress" (Hupe and Saetren, 2015: 95; see also Hupe, 2014: 167; Saetren, 2014). Winter (2012: 264) specifies this notion further by suggesting that implementation research can be improved by "(1) accepting theoretical diversity rather than looking for one common theoretical framework, and (2) developing and testing partial theories and hypotheses rather than trying to reach for utopia in constructing a general implementation theory". In this way, knowledge can be accumulated, and implementation research strengthened (Saetren, 2014; Smith and Larimer, 2009; Winter, 2006, 2012).

In a recent systematic review of implementation research Saetren (2014) points out that, so far, policy implementation studies are yet to meet the guidelines of third-generation implementation research. He specifically points to the lack of theory-driven studies in current implementation research and urges more studies to test the insights generated in previous work systematically (Saetren, 2014). For theoretical progress of implementation field, it is essential to analyse whether theories derived and tested for one particular context also hold in other contexts (Smith and Larimer, 2009: 16). In this light, it is important to examine whether explanations derived for *national* differences in EU implementation also can account for *local* differences.

In explaining national differences with EU compliance, scholars have identified two schools of thought: politics and management (Tallberg, 2002). EU compliance research has shown that national differences in compliance at transposition level can be largely explained by domestic politics and preference constellations (Mastenbroek and Kaeding, 2006; Treib, 2014). Alternatively, the management approach in EU compliance research views implementation as a matter of managerial capacity and the way policy implementation is organized (Walker and Andrews, 2013).

While both explanatory approaches have their merits, it is important to understand which of the two approaches drives different local responses to EU policy (Bondarouk et al., 2019). Crucially, if political explanations outweigh managerial ones, the remedy for non-implementation is fundamentally different. Where the political approach assumes that strict enforcement mechanisms can remedy non-implementation, the management approach advocates for capacity-building strategies (see Tallberg, 2002). If one sets to improve local implementation of EU directives, therefore, we first need to understand which of the two approaches drives different local responses to EU policy. However, whether the politicisation of EU policies or managerial explanations can account for differences in *local* implementation is yet to be determined (Treib, 2014).

Summing up, despite the vast scholarly field of implementation research, the final puzzle of explaining variance in EU implementation performance between local implementers is yet to be systematically addressed in the literature.

1.6 RESEARCH QUESTIONS AND CONTRIBUTIONS

As set out above, the national court case examples demonstrate the struggle to identify what constitutes comprehensive EU policy implementation on the ground. EU compliance research, however, has provided little guidance on the question of how to systematically capture the rich reality of practical implementation performance. Secondly, local governments play an important role in the EU implementation. Yet, the scholarly community of EU compliance research has paid little attention to these local actors. Finally, the court cases demonstrate that local policy responses to EU legislation may differ. Whether these differences in EU local implementation can be explained by using the same explanations used for transposition is yet to be determined.

In order to address these puzzles, this thesis zooms in on the local implementation of the AAQ directive in the Netherlands. First of all, in light of many infringement proceedings against various member states, the Netherlands presents an interesting case. In the early 2000s, the AAQ directive gave rise to implementation problems in a lot of Dutch municipalities (Busscher et al., 2014). While large differences still exist in the way Dutch municipalities implement the directive, almost all municipalities managed to implement action plans to reduce air pollution. At the same time, the implementation of the AAQ directive in the Netherlands follows a typical path of implementation: just like in almost all other EU member states, the task of devising air quality management plans has been decentralized in the Netherlands (Busscher et al., 2014). In contrast to municipalities of big member states, however, Dutch municipalities are very comparable in terms of geography and sources of air pollution. Therefore, faced with largely similar physical conditions, Dutch municipalities could potentially take similar measures (Busch et al., 2012; Busscher et al., 2014).

Having outlined the challenges of implementing the EU AAQ directive at the local level and the limited guidance that the scholarly community has provided so far in addressing them, the central research question of this thesis is:

How can we explain why Dutch municipalities differ in their implementation performance of the EU Ambient Air Quality directive?

This central research question is broken down into three sub-questions which correspond to the research puzzles identified earlier:

(1) How can implementation performance be conceptualised in order to go beyond the dichotomous understanding of correct compliance and to capture variation in policy implementation?
(2) What are the differences between Dutch municipalities in the implementation of the key procedural Article 23 of the EU Ambient Air Quality directive 2008/50/EC?
(3) To what extent can differences in Dutch local implementation of the EU Ambient Air Quality directive 2008/50/EC be attributed to political or managerial considerations?

By answering these research questions, this thesis seeks to make both an empirical and a theoretical contribution to the EU implementation literature. The *empirical* contribution is three-fold. First, by putting local government at the centre of this research this thesis addresses an empirical gap in the EU compliance literature (Thomann and Sager, 2017; Treib, 2014). Second, compared to the Water Framework Directive, the AAQ directive has received less scholarly attention (Angelova et al., 2012; Bondarouk and Mastenbroek, 2018). The AAQ directive is a typical EU environmental directive containing both substantive and procedural provisions[1] (Bondarouk and Liefferink, 2017). Hence, the analysis of implementation of this directive will yield generalizable insights to at least other EU environmental directives' implementation. Finally, implementation research often assesses one point in time (Hupe and Saetren, 2015; Saetren, 2014). This thesis builds upon empirical data of over *ten years* of policy implementation in Dutch municipalities. In this way, this thesis also responds to the research call of the current 'third-generation implementation research' to conduct more longitudinal studies, i.e. studies with a research time frame of at least 5 to 10 years (Hupe and Saetren, 2015; Saetren, 2014).

1 The substantive provisions establish air quality objectives, such as standards for the concentrations of specific air pollutants. The procedural provisions call for the assessment, monitoring, improvement, and sustainment of air quality through rigorous air quality plans.

The *theoretical* contribution is also three-fold. First of all, this thesis offers a 'systematized concept' (Adcock and Collier, 2001) of implementation performance to enable the systematic analysis of differences in practical implementation performance across implementers, while going beyond a dichotomous understanding of compliance. By offering a tool to compare implementation performance across implementers, this thesis contributes to knowledge accumulation (cf Winter, 2006: 159). Second, by examining whether the explanatory variables of political and managerial approaches (Tallberg, 2002) identified in EU compliance research also hold in the local context, this thesis examines the strength of implementation theory (see Saetren, 2014: 86; Winter, 2012: 264). For both political and managerial approaches, variables were selected that have been repeatedly identified in different literature reviews to correlate with comprehensive implementation performance. Such focused partial theory testing approach addresses the call of the 'third-generation implementation research' for more deductive research designs in order to strengthen the research field (Hupe and Saetren, 2015; Saetren, 2014; Winter, 2006, 2012). Finally, so far both managerial and political explanations have been analysed mainly for the *timeliness* of EU transposition (Zhelyazkova 2013; Zhelyazkova and Torenvlied, 2011). Instead, this thesis focuses on the *content* of policy implementation, i.e. the policy measures that local governments took in light of the AAQ directive. Hence this thesis adds to our understanding of the explanatory power of explanations derived in EU transposition research.

1.7 RESEARCH APPROACH: FOUR STUDIES

To address the research questions, I have carried out four studies, each with a different methodology, data, and specific contribution to EU compliance research. Table 1.1 presents how the studies build on each other.

The *first study* (Chapter 2) deals with the first sub-question of the thesis and the first puzzle of EU compliance research. It proposes a conceptual framework for analysing EU implementation performance. The goal of this study is to develop and test a general "systematized concept" (Adcock and Collier, 2001: 532) of *implementation performance* (Hupe, 2011: 66; Winter, 2006: 159) that goes beyond the details of specific directives, and captures variation in implementation. In contrast to the conventional dichotomous top-down conceptualisation of EU compliance, the three-dimensional conceptual framework allows for a full-fledged conceptualisation of implementation performance (Bondarouk and Mastenbroek, 2018). In order to see whether the framework is able to capture the rich diversity of EU implementation, this study checks whether the framework is exhaustive, and whether the proposed dimensions are mutually exclusive. In order to do so, it compares the conceptual framework with the rich descriptive insights from the literature on the practical implementation of EU environmental policies. Using the conceptual framework, 70 recent studies on practical

implementation in the field of environmental policy, covering 18 directives, are analysed. This study argues that the framework is instrumental to capturing and nuancing the full diversity of EU implementation often missed by a dichotomous conceptualisation of compliance characteristic to state-centric compliance approaches. At the same time, it also shows which dimensions of implementation performance have been examined in the literature and which deserve more attention. Hence, I also reflect on the current understanding of the concept of implementation performance in the environmental policy research.

In the *second study* (Chapter 3), this three-dimensional conceptual framework is used to systematically map the differences in local implementation performance of the AAQ directive. This study deals with the second sub-question and the second puzzle of EU compliance research. It presents a systematic evaluation of the implementation of a core procedural provision, the obligation to design air quality policy plans (Article 23 of the EU Ambient Air Quality Directive 2008/50/EC). 13 Dutch municipalities and their policy efforts over a 10-year period are subjected to this evaluation. 237 policy documents and 18 interviews informed the analysis. The findings illustrate great differences in the implementation performance between Dutch municipalities (Bondarouk and Liefferink, 2017). This study adds to EU compliance research by showing that differences in EU implementation cannot only be observed at the member state level, but also within member states. In contrast to previous research, a more nuanced picture is presented when it comes to the concepts of 'compliance', 'non-compliance', and 'over-compliance' (Bondarouk and Liefferink, 2017).

The *third study* (Chapter 4) builds on the data presented in the second study (Chapter 3) and focuses on the third sub-question addressing the explanations for differences in EU local implementation performance. It therefore deals with the third puzzle of EU compliance research. This study draws on the insights from EU compliance research to explain differences in EU local implementation performance Angelova et al., 2012; Spendzharova and Versluis, 2013; Toshkov, 2011; Thomann 2015; Treib, 2014). The study assesses whether hypotheses developed in state-centric EU compliance research also hold when applied to the local government level (Bondarouk et al., 2019). It contrasts a managerial approach with a political approach (Mastenbroek and Kaeding, 2006, Tallberg, 2002; Treib, 2014) to evaluate the explanatory power of each, when applied to the local level. Understanding which of the two approaches drives different local responses to EU policy bears consequences for the appropriate remedy for low implementation performance (Bondarouk et al., 2019). The four municipalities that scored the highest/lowest in the second study (Chapter 3) are selected for an in-depth analysis. Additional empirical data was gathered for this study. Interviews with 37 respondents who were involved in AAQ policy over the period of 10 years informed the analysis. The findings of a comparative within-case analysis demonstrate how political explanations outweigh managerial explanations in accounting for variation in implementation performance. The contribution of this study to EU compliance research is theoretical: by applying explanations derived from state-centric EU compliance research, this study contributes to the bigger

question of how strong the implementation theory is (cf Hupe and Saetren, 2015; Hupe, 2014; Saetren, 2005, 2014; Smith and Larimer, 2009; Winter, 2006, 2012).

The *fourth and final study* (Chapter 5) places the findings of the explanatory third study (Chapter 4) in a larger perspective and sets out a research agenda for EU local implementation more broadly, going beyond the field of environmental policy (Bondarouk, 2017). This study also deals with the third research puzzle. The third study (Chapter 4) focused on one specific EU directive and compared local governments within one member state. Hence it is important to examine whether the explanations given in this specific setting resonate in other studies. In order to assess how the findings of this thesis relate to other studies, the final study of this thesis pulls the highly fragmented and descriptive EU local implementation research together (Dossi, 2012; Loefgren, 2015; Saetren, 2005, 2014; Treib, 2014; Winter, 2006). It also specifies further what other research avenues in EU local implementation research are still uncharted.

While this study puts the findings of the third study in perspective, it also contributes to EU compliance research in its own right. The majority of local EU implementation studies is often criticised for being too descriptive, based on a single-case study design, and not adding up to a comprehensive and general understanding of what is happening and why (Dossi, 2012; Treib, 2014: 19)[2]. These local studies are scattered across many different policy specific journals, which makes it difficult to oversee the scientific progress in the field (Saetren, 2005, 2014; O'Toole, 2017; Treib, 2014; Winter, 2006). As a result, there seems to be little knowledge accumulation, which hampers advancing the research field (Dossi, 2012; Loefgren, 2015). This final study of this thesis addresses this shortcoming by offering a systematic review of 85 studies of local government implementation of EU policies. It reveals evidence on local non-compliance with EU policies, national and policy patterns of non-compliance, and provides a synthesis of explanations for policy implementation. Following, a seven-point future research agenda is proposed in order to advance our understanding of how local governments make EU policies work.

2 The same criticism is also applicable to general implementation research (Hupe, 2014: 167; O'Toole, 2017: 377; Saetren, 2005; Smith and Larimer, 2009: 16).

Table 1.1: Schematic representation of the thesis

Empirical and theoretical puzzle		Sub-question in short	Chapter	Research Design
Introduction			1	
1.	Conceptualisation of EU compliance beyond a dichotomous understanding	How to conceptualise compliance?	2	Conceptual analysis: Corroborating the systematised concept of 'implementation performance' through the systematic literature review of 70 recent studies on practical implementation in the field of environmental policy, covering 18 environmental directives.
2.	Description of local government policy efforts to make EU policy work	What are the differences in local implementation?	3	Empirical analysis: Mapping of differences in EU AAQ local implementation in 13 Dutch cities over 10 years by using the conceptual framework of 'implementation performance'.
3.	Understanding of local differences in EU policy implementation	How can differences in implementation be explained?	4	Empirical analysis: Theory-driven comparative within-case study of differences in EU AAQ local implementation in 4 Dutch cities over 10 years.
		What are the remaining research gaps?	5	Research agenda analysis: Systematic literature review of 85 studies on EU local government implementation (no time frame or policy restriction).
Conclusion			6	

2.

Reconsidering EU Compliance: Implementation performance in the field of environmental policy

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ABSTRACT

European Union (EU) environmental policy can only work in practice when it is implemented by and within the member states. Yet, despite its importance, we still lack a solid and cumulative understanding of the practical implementation of EU environmental policies, mainly because of the dominance of case-specific empirical insights and the dichotomous conceptualisation of compliant implementation. This paper proposes a conceptual framework for analysing implementation performance, which is built around three dimensions: substance, scope and effort. The framework's relevance and analytical quality are substantiated by a systematic review of empirical studies on practical implementation of 18 EU environmental directives. We find evidence of three types of knowledge deficits: there is neglect of the 'scope' and 'effort' dimensions of implementation; disproportionate attention to the Water Framework Directive, and the Northern and Western European member states. The proposed conceptual framework aims to inform future research on EU environmental implementation

2.1 INTRODUCTION

A key issue in environmental governance lies in ensuring that ambitious policies in books are translated into policies in action (Leventon and Antypas, 2012). This is no different for the European Union (EU), which is an active producer of environmental policies. The EU's central environmental goals of greening the EU economy, protecting nature and safeguarding health and quality of life across the EU (Knill and Lenschow, 2000) are clearly undermined if EU policies are not complied with by the member states.

Consequently, a number of scholars of EU environmental governance have studied compliance with EU environmental policy, i.e. the national implementation of EU environmental policy (e.g. Bennett, 1993; Börzel, 2000; Börzel and Risse, 2000; Bugdahn, 2005; Haverland, 2003; Jans et al., 2009; Knill and Lenschow, 1998, 2000; Laffan and O'Mahony, 2008; Liefferink et al., 2011; Morris, 2011). This area of research has closely examined to what extent and how the EU's member states have implemented the policy requirements laid down in various directives.

However, the literature on EU environmental policies has not produced a complete picture of the state of EU environmental implementation (Tosun, 2012). The reasons for this lack of overall insight are twofold. First, most existing studies are highly case-specific, deriving their operationalisation of implementation conformity from the provisions of particular directives (Treib, 2014). This approach leads to the drawing of idiosyncratic findings, which do not reach a broader audience and hinder the accumulation of knowledge and the drawing of general conclusions (Engeli and Allison, 2014; Schaffrin et al., 2015: 257; Töller, 2010; Tosun, 2012; Treib, 2014).

Second, environmental implementation studies often evaluate implementation in dichotomous fashion – compliant or non-compliant implementation (e.g. Bauer et al., 2007; Börzel, 2000; Morris, 2011; see Treib, 2014 for more examples). This conceptualisation of responses to EU policies is of restricted use in the field of EU environmental policy, given the growing use of procedural provisions and open norms (Börzel, 2003; Hartlapp and Falkner, 2009; Knill and Lenschow, 2004; Liefferink et al., 2011; Scott, 2000). The mere fact that a member state or local implementer lives up to a procedural obligation does not have any bearing on *the extent to which* the implementer really makes 'EU policy work' (Haverland and Romeijn, 2007). Accordingly, variation in implementation practices is not systematically assessed.

As a result, we are still in the dark about the extent to which and ways in which member states take EU environmental policy seriously (see Voermans, 2015). Answering this question requires a full-fledged conceptualisation of the various aspects of implementation practices in response to EU legislation (Hupe, 2014; Lange, 1999; Thomann, 2015; Winter, 2006, 2012). To this end, the first goal of this paper is to develop and test a general "systematized concept" (Adcock and Collier, 2001: 532) of implementation performance (Hill and Hupe, 2003: 475;

Hupe, 2011: 66; Winter, 2006: 159) that goes beyond the details of specific directives, and captures variation in implementation.

This article uses a two-step deductive approach to construct the conceptualisation. The first step is to derive aspects of implementation performance from the literatures on national policy implementation, analysis, design, evaluation and change. The second step is to compare the conceptual framework thus obtained with the insights from the literature on the practical implementation of EU environmental policies. We conduct a systematic literature review of case studies on practical implementation in the field of environmental policy published in the years 2010–2014, covering 18 different environmental directives. We check whether the framework is complete, and whether the categories are mutually exclusive. This second step also facilitates a second goal of this article: the isolation of knowledge gaps in the current research on practical implementation of environmental policies.

Finally, this study conveys lessons for the broader field of EU compliance (Treib, 2014). While the literature has repeatedly called for more research on the practical implementation of EU directives (e.g. Mastenbroek, 2005; Treib, 2014; Versluis, 2007), it has found itself in need of a useful concept for doing so systematically (Tosun, 2012; Treib, 2014). By developing and corroborating such a concept, this paper may step up compliance research in other policy sectors. We aim to pave the way for more systematic assessment of EU implementation performance in the field of environmental policy thus facilitating knowledge accumulation (Saetren, 2014; Sager et al., 2014; Thomann, 2015; Tosun, 2012). Ultimately, the paper is expected to allow for fuller diagnosis and understanding of the implementation deficit that has been claimed to haunt the EU (Hupe, 2014: 170; Treib, 2014; Voermans, 2015: 365).

2.2 SETTING THE SCENE: DEFINING IMPLEMENTATION PERFORMANCE

Before systematically conceptualising implementation performance, we need to define the concept's core components: implementation and performance. Starting with the former, *implementation* refers to the stage between the transposition of EU directives and the enforcement of these directives by European or national actors. To differentiate it from transposition or legal transposition, this stage is also called practical implementation (Mastenbroek, 2005; Treib, 2014).

We argue that practical implementation consists of two distinct substages, the first of which we refer to as *final policy formation* on the ground. Hupe and Hill (2016: 106-7) argue that even at the stage of practical implementation there is a lot of decision making yet to be done. Any attempt to implement a policy always brings new issues on the agenda and thus implementation and decision-making overlap (Hill and Hupe, 2016: 106; Lindblom and Woodhouse, 1993: 11). Even though generally overlooked in the EU implementation literature, this stage should be regarded as an important step in practical implementation, as

it involves the local authority's efforts to operationalise national policy for practical purposes (Hill and Hupe, 2003: 479; Leventon and Antypas, 2012: 256; Spicker, 2006: 44; Steunenberg and Dimitrova, 2014: 7; Versluis, 2007; Winter, 2006: 159). During this substage, complex national policy – or transposed EU legislation, for that matter – is broken down into a series of tangible implementation tasks (Spicker, 2006: 43; Winter, 2006: 159). Furthermore, the responsible authority is assigned, a timescale within which the task is to be completed is established, and evaluation parameters are set (Spicker, 2006: 43; Winter, 2006: 159). If policy formation is completed, *policy delivery* (Treib, 2014; Versluis, 2007; Winter, 2012) commences. This second implementation stage is characterised by the actual putting in practice of the policy instruments. In environmental policy, typical examples are the enactment of physical measures or the provision of permits.

Having defined *implementation,* we move on to the definition of *performance*. The literature on policy analysis and implementation distinguishes two interpretations of performance. One focuses on policy *outputs,* e.g. the actions taken in response to law (Hill and Hupe, 2003: 475; Howlett et al., 2009: 183; Hupe, 2011: 66; Vedung, 1997; Winter, 2006: 159). The second interpretation focuses on policy *outcomes*, impacts or effects, i.e. the question of whether a policy indeed resolved the problem it set out to solve (Barrett and Fudge 1981; Berke et al., 2006; Mastop and Faludi 1997; Tosun, 2012: 440; Vedung, 1997; Winter, 2006: 159).

This study understands performance in the first way, i.e. in terms of *outputs*. It does so for a methodological reason, as an evaluation of EU policy impact is extremely challenging, due to the fact that an isolation of the EU effect is practically impossible (Bauer and Knill, 2014; Haverland, 2006; Tosun, 2012). Any assessment of policy outputs presupposes a firm understanding of *policy instruments*: the techniques by which authorities attempt to change or maintain the policy status quo (Howlett et al., 2009; May, 2003: 225; Schaffrin et al., 2015). Being the building blocks of any policy (May, 2003: 225), policy instruments are the core of any policy output (Bauer and Knill, 2014; Schaffrin et al., 2015: 260).

We propose to compare implementation performance both in a vertical and a horizontal manner. Where the EU standards are provided a vertical comparison is necessary, i.e. a comparison of implementation performance with the objectives set out in the superior EU law. Horizontal comparison, in turn, concerns the differences in implementation performance among implementers at the same administrative layer, e.g. municipalities, using the same policy instruments (Hupe, 2011; Winter, 2006).

This horizontal evaluation is especially relevant in cases when EU legislation leaves discretion to implementers or in case of procedural provisions. The discretion may result in great variance in implementation, which is still within the boundaries left by EU directives (Hartlapp and Falkner, 2009; Sager et al., 2014; Thomann, 2015; Treib, 2014). EU environmental law increasingly contains procedural provisions (Börzel, 2003; Héritier, 2002; Knill and Lenschow, 2004; Liefferink et al., 2011; Scott, 2000). These are designed to indirectly affect the desired policy outcome through the manipulation of policy processes (Howlett et al., 2009;

Huber and Shipan, 2002). For example, implementers may have to develop an action plan to tackle an environmental problem. A mere vertical evaluation of implementation in this case would reduce a great variance in policy responses to a dichotomous notion of compliant versus non-compliant implementation. A horizontal evaluation in this case would allow for more benchmarking and thus also better insight into implementation practices.

These horizontal and vertical assessments of policy performance can be made on two dimensions: density and intensity (Bauer and Knill, 2014; Knill et al., 2012; Schaffrin et al., 2015). Policy *density*, firstly, refers merely to the number of policy instruments put in place to reach the policy objectives, i.e. the breadth and differentiation of legislative activity (Bauer and Knill, 2014: 33). Policy *intensity*, secondly, concerns the content of the policy instruments (Knill et al., 2012; Schaffrin et al., 2015), i.e. the breadth and differentiation of policy responses (Bauer and Knill, 2014: 33). In order to study to what extent local implementers make EU policy work, we specifically focus on *intensity*, as this sheds light on the policy commitment of local implementers (cf. Schaffrin et al., 2015: 261).

In sum, this article defines implementation performance as the intensity of policy outputs undertaken by implementers in response to EU policy instruments – relative to the directive's objectives (vertical aspect) and to other implementers' outputs (horizontal comparison). Given the importance of open norms and procedural requirements in EU environmental law (Knill and Lenschow, 1998, 2000; Newig and Fritsch, 2009; Newig and Koontz, 2014; Scott, 2000), the concept does not only have a vertical focus, i.e. aimed at comparing implementation with EU rules, but also a horizontal focus, i.e. aimed at comparing implementation practices between various implementing actors – either member states or units within these member states. The next section develops and specifies this concept by proposing three different analytical dimensions, together comprising ten specific aspects.

2.3 CONCEPTUAL FRAMEWORK

In order to capture the concept of policy performance in more depth and detail, this paper employs the approach of Adcock and Collier (2001). Accordingly, the concept of interest is broken down into different dimensions, so as to specify it in as detailed a fashion as possible.[3] In doing so, we use and integrate the existing literatures on national policy implementation, policy analysis, policy design, policy change and policy evaluation (e.g. Baldwin and Cave, 1999; Bauer and Knill, 2014; Howlett and Cashore, 2014; Howlett et al., 2009; Huber and Shipan, 2002; Hupe, 2011, 2014; Schaffrin et al., 2015; Spicker, 2006; Tosun, 2012; Winter, 2006, 2012).

Synthesising these literatures, three main dimensions of implementation performance emerge: substance, scope and effort. As illustrated in Figure 2.1, we propose to divide

3 The framework does not specify the indicators, as this would bring the policy context into the framework and preclude it from travelling across policy sectors and cases.

these three dimensions each into more refined aspects. The scores for these aspects are to be aggregated to form one score per dimension, which can be aggregated to one overall score. In case of horizontal comparison, scoring is the result of comparison of the different implementers under study, e.g. regions, agencies or municipalities. In this case the scores on implementation performance are established relatively (Hupe, 2014: 173). When evaluating implementation performance, it is best to present both scores: the scores on different dimensions and the total score on implementation performance.

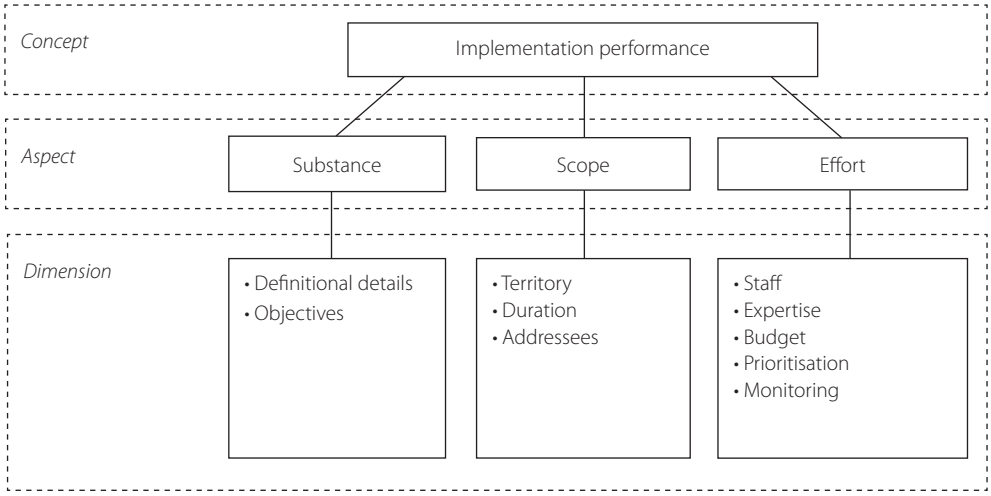

Figure 2.1: Conceptual framework

Dimension 1: substance

Substance, the first dimension of implementation performance, relates to the essence of what central issue is being regulated by the policy instrument (cf. König and Mäder, 2013; Steunenberg, 2007; Zhelyazkova, 2013). The literature suggests two aspects of this dimension: definitional details and objectives of the policy instrument.

The first aspect of substance relates to the *definitional details* used during practical implementation (cf. Spicker, 2006: 43; Huber and Shipan, 2002: 51). The directive and its transposing measures may contain ambiguous elements that will be subjected to interpretation at practical implementation (Beijen, 2011: 152). When vertical evaluation of implementation performance is impossible, implementation performance will depend on how restrictively or comprehensively these elements are defined during practical implementation relative to other implementing peers (Howlett et al., 2009). The more specifically the definitional details are provided in the local statutes, the more specific and consistent implementation will be (cf. Baldwin and Cave, 1999: 43; Bauer and Knill, 2014: 33; Huber and Shipan, 2002: 50–51; Hupe, 2011: 69; Schaffrin et al., 2015: 264). There are three elements of definitional details that have to be defined in the practical implementation.

First of all, most directives contain a list of definitions in one of their first articles (Beijen, 2011). Still, these definitions may be open to interpretation, which may give rise to differences in implementation performance on the ground. The definitions of 'waste', 'best available techniques' and 'discharge', for instance, have given rise to much case law and literature (Beijen, 2011: 152). The absence of clear definitions becomes particularly relevant if the literal wording of a directive finds its way into national legislation, because local implementers will have to refine these concepts themselves to make them operational for practical implementation (Beijen, 2011: 152; Spicker, 2006: 43; Scott, 2000: 45–46). Second, a directive often contains a provision that an appropriate body should be appointed to implement the policy. The practical implementers are often tasked to define the responsibilities of persons or bodies who are engaged in the delivery of policy outputs (cf. Scott, 2000: 45–46; Huber and Shipan, 2002: 50–51; Schaffrin et al., 2015: 264). Lastly, definitional details relate to the exceptions when some tasks or actions should not be taken or are exempted from regulation (cf. Scott, 2000: 48). The more of such exemptions there are, the less comprehensive the practical implementation.

The second aspect of substance concerns the *objectives* of the policy instruments as adopted by the practical implementer. These objectives are 'specific on-the-ground policy requirements' (Bauer and Knill, 2014: 33; Howlett and Cashore, 2014: 21; Knill et al., 2012; Leventon and Antypas, 2012: 256). If objectives are set, the purpose of the policy is made transparent to the public and other political actors, and thus the implementers can be held responsible for the achievement of these goals (Schaffrin et al., 2015: 263). A directive contains two types of policy instruments, i.e. substantive and procedural, that have to be operationalised into practical objectives on the ground.

Substantive policy instruments include norms, standards or target values (Beijen, 2011: 154). Practical implementers may impose stricter or more lenient norms or standards in their own jurisdictions (Beijen, 2011: 154; Huber and Shipan, 2002: 50–55; Jans et al., 2009). For example, local governments may aim for higher air quality standards then the EU directive prescribes. Procedural policy instruments concern matters like public participation, formulation of policy plans/reports, or the designation and protection of areas (Beijen, 2011; Knill and Lenschow, 1998, 2000; Newig and Koontz, 2014; Scott, 2000). For example, practical implementers are likely to differ in how they set the objectives for public participation. Policy performance in this respect may range from mere information provision to full involvement with voting procedures installed (cf. Howlett et al., 2009: 117–118; Huber and Shipan, 2002: 58). In the case of an obligation to formulate plans or reports, practical implementers will again set different objectives. These can vary in what types of measures are included in the plans, or what type of information is included in the reports (cf. Huber and Shipan, 2002: 58). As another example, practical implementers may set the criteria for designation and protection of areas in rather different ways (Beijen, 2011: 155).

Dimension 2: scope

The second dimension of implementation performance concerns the scope of implementation (Bauer and Knill, 2014: 33; Beijen, 2011: 153; Thomann, 2015). This refers to the range of the policy: where, when and to whom does the policy task apply? If the scope is ambitious, it signals that an implementer takes the policy seriously (Schaffrin et al., 2015: 263). The literature has suggested three aspects of scope on which practical implementation may differ: territory, duration and addressees (Bauer and Knill, 2014: 33; Huber and Shipan, 2002: 49; Jans et al., 2009; Jenkins-Smith et al., 2014: 189). Depending on whether a directive or national legislation specifies these three aspects of scope, implementation performance should be evaluated either vertically or horizontally.

The first aspect of scope is the *territory* where the policy instrument applies (Bauer and Knill, 2014; Jans et al., 2009). Typically, the practical implementers may choose to make the policy instrument applicable to a whole region or only specific areas in a city. For example, local government may choose to target only a specific area in a city with extra air quality measures, while another will target the whole city. The second aspect of scope is temporal in nature, and concerns the *duration* of the policy task (Bauer and Knill, 2014; Huber and Shipan, 2002; Jans et al., 2009). For example, a specific policy plan may differ in terms of temporal span among the implementing authorities. The implementers may apply the environmental standards earlier or longer than determined in the national or EU policy instruments. The third aspect of scope captures how broad or specific the group of *addressees* targeted by the policy is (Bauer and Knill, 2014; Jans et al., 2009; Jenkins-Smith et al., 2014). Practical implementers may reduce or broaden the group targeted by the policy. For example, they may target a broader group of companies to perform an environmental impact assessment than the national or EU legislation prescribes. In case of procedural policy instruments, this aspect of scope relates to, for instance, who is invited to the public consultation.

Dimension 3: effort

The third and final dimension of implementation performance concerns the *effort* that implementers put into accomplishing a policy's goals (Bauer and Knill, 2014: 34; Howlett et al., 2009: 186; Winter, 2006: 160). Effort refers to 'the factors affecting the probability that substantial requirements are effectively achieved' (Bauer and Knill, 2014: 34). The policy instruments that are characterised by higher intensity have more effort invested in them (Schaffrin et al., 2015: 262). Five aspects of the effort dimension emerge from the literature.

The first three aspects concern the resources that implementers allocate to implementation. The first aspect is the number of *staff*, i.e. organisational resources, designated to support the implementation of policy instruments (Bauer and Knill, 2014: 34; Hartlapp, 2009: 475; Schaffrin et al., 2015: 262; Tosun, 2012: 442). It relates to how many people in the organisation are responsible for defining the policy tasks and carrying them out. The second aspect concerns the *types of expertise*, i.e. informational resources, involved to support policy

implementation (Bauer and Knill, 2014: 34; Radaelli and De Francesco, 2007; Schaffrin et al., 2015: 262), which relates to the type of knowledge consulted during policy implementation. An example could be whether policy implementers have different backgrounds in order to facilitate the synergy of expertise and create a sound and feasible policy. The third aspect of effort is the percentage of an implementer's *budget*, i.e. the financial resources, allocated to the implementation of policy goals (Bauer and Knill, 2014: 34; Schaffrin et al., 2015: 262-263). Because these resources are typically not specified in national or EU legislation, the assessment should be horizontal in nature.

The fourth aspect of effort concerns the *prioritisation* of goals and measures within one policy (Winter, 2006: 160). Given their limited resources, implementers typically prioritise some goals or measures over others within the same policy. For example, a policy task might contain measures which the implementers are highly unlikely to implement all. Therefore, one can analyse which measures or goals take precedence and receive most attention. The practical implementers are likely to vary in terms of what policy norms or measures are prioritised. Similarly, to the first three aspects, prioritisation is not specified by national or EU legislation, which necessitates horizontal comparison.

The final aspect of effort is *monitoring* (Bauer and Knill, 2014: 34; Beijen, 2011: 159; Howlett et al., 2009: 185; May and Winter, 1999; Schaffrin et al., 2015: 264; Tosun, 2012: 442). It describes how the practical implementer will assess the quality of the delivered task as well as the consequences of a failure to act, or how the practical implementers envision controlling for policy adherence (cf. Hartlapp, 2009: 475; Vedung, 1998: 31). Huber and Shipan (2002: 52) refer to it as the 'quality assurance' mechanism, which aims at ensuring policy adherence (see also May and Winter, 1999). The presence of such an enforcement mechanism signals to what extent practical implementers really make a policy work (Howlett et al., 2009; Schaffrin et al., 2015: 264). Depending on whether a directive or national legislation prescribes local monitoring, implementation performance on these aspects should be evaluated vertically or horizontally.

2.4 RESEARCH DESIGN

Having conceptualised implementation performance, several questions present themselves. First, is the framework complete when compared to existing empirical studies of implementation? Second, are the theoretical aspects proposed mutually exclusive within a dimension (Schreier, 2012: 75)? Hence the collective exhaustiveness and mutual exclusiveness of the framework's dimensions must be corroborated (Schreier, 2012: 75). And third, how complete is our understanding of implementation performance in the field of EU environmental policy?

To answer these questions, a deductive qualitative content analysis (Schreier, 2012) was conducted, comparing the conceptual framework with existing empirical studies of practical implementation of specific environmental directives. This analysis reduces the data by classifying the specific and concrete information from the earlier studies under the aspects of our conceptual framework (Potter and Levine-Donnerstein, 1999; Schreier, 2012).

These existing studies, published in journals, served as data for our analysis. The studies were selected using a systematic literature review method in order to avoid any intentional or unintentional bias in the selection of the data (Petticrew and Roberts, 2006). Web of Science (Thomson), one of the largest scientific databases for the social and environmental sciences, was selected for the collection of data. The data were selected in five steps in July 2014.

First, as this research is interested in implementation and compliance with EU directives, a Boolean search was carried out using the keywords '(EU OR directive) AND (implement* OR compliance)'. Web of Science yielded 7989 documents with these keywords in either the title and/or the abstract of the documents. Second, the analysis was limited to academic articles, because these enjoy peer review which safeguards quality. The sample was restricted to articles written in English and dealing with environmental policy. This selection resulted in 940 articles. Third, the titles and the abstracts were closely read, so as to include only those articles that deal with the practical implementation of EU directives. Articles focusing on policy outcomes, cost–benefit analysis of policy implementation, technical calculations or anything else but implementation performance were excluded. This selection step yielded 187 articles. To validate this sample, we checked whether the articles on practical implementation of EU environmental directives identified in more general EU literature reviews (Angelova et al., 2012; Treib, 2014; Toshkov et al., n.d.) were also included in our sample of 187 articles. This was indeed the case. Fourth, aiming to grasp current knowledge, articles were selected if published in the previous five years, i.e. 2010–2014. This resulted in a database of 112 articles. As a final selection step, we applied the same inclusion and exclusion criteria as in step three of the selection process to the full texts of the articles. This led to the final identification of 70 articles to be subjected to the qualitative content analysis. See Appendix A for the full list.

For this analysis we coded these 70 articles based on the conceptual framework. We used a standard coding procedure (Schreier, 2012). Following this procedure, a codebook was developed, which contained operational definitions of the previously defined ten aspects of implementation performance. Analysis of the first two articles yielded typical examples for all the aspects, which were added to the codebook. The deductive analysis of the articles was performed using NVivo 10 software.

In order to examine the framework's quality, i.e. the collective exhaustiveness and mutual exclusiveness of the framework's dimensions, the following three steps were taken. First, to corroborate the concept's exhaustiveness, an additional code was created to keep track of any descriptions that would not fit the framework. Such instances were to be coded as 'emerging themes'. Second, in order to examine the mutual exclusiveness of aspects of one

dimension, we checked whether the coding units had overlapping aspect-codes assigned to them (Schreier, 2012). And third, the coding was subjected to consistency control, i.e. reliability, by two additional coders (Kippendorf, 2004: 215; Schreier, 2012: 169). A strong measure of reliability and thus also quality assurance of the coding scheme, i.e. the conceptual framework, is to examine whether others can interpret the data by coding it in the same manner, or at least agree on the interpretation of the data (Kippendorf, 2004: 215; Schreier, 2012: 169).

This intercoder reliability examination was established in two ways. The articles were divided into two roughly equal and mutually exclusive subsets. The first subset (N=36) was divided between the two coders and subjected to independent coding of the result sections of the articles. The second subset (N=34) was also divided between these two coders, but instead of independent coding the coding of the main coder was checked by these two coders. The coders were instructed to keep track of any data that would not fit the framework, and code these as 'emerging themes'. These two different ways of performing intercoder reliability assessment are the most common ways of examining the reliability of coding (Schreier, 2012: 169).

In order to evaluate the completeness and coverage of our understanding of implementation performance in the field of EU environmental policy, the following three steps were taken. First, by coding 70 articles on the aspects of the conceptual framework we reflected on the state-of-the-art knowledge of implementation performance. Such analysis allowed us to see which aspects have received most empirical attention so far, and to identify any gaps in our understanding of environmental policy implementation. Second, we kept track of what directives were examined to see whether some directives have received more attention and whether there are systematic differences in how implementation performance was evaluated based on the directive at stake. And third, for the same reasons, we also kept track of what countries were studied in these articles.

2.5 ANALYSIS

As depicted in Table 2.1, the sample covers 18 EU environmental directives. 32 articles (46 per cent) focus on the Water Framework Directive (WFD). Seven articles cover multiple directives in their study. The EU Strategic Environmental Assessment Directive is examined by six articles, the Natura 2000 by five articles, and the Environmental Noise Directive and Habitats Directive by three articles each.

As can be seen in Table 2.2, the sample covers 19 different member states. 17 articles (24 per cent) examined two or more countries. The top five most examined countries in the sample are United Kingdom, Germany, Ireland, Italy and the Netherlands.

Table 2.1: EU directives in the sample

EU directive	Frequency
Water Framework Directive (60/2000)	32
Multiple directives	7
Strategic Environmental Assessment Directive (2001/42/EC)	6
Natura 2000 (Wild Birds Directive (79/409/EEC) and the Habitats Directive (92/43/EEC))	5
Environmental Noise Directive (2002/49/EC), Habitats Directive (92/43/EEC)	3
Drinking Water Directive (98/83/EC), Floods Directive (2007/60/EC)	2
EU Biofuels Directive (2003/30/EC), Dangerous Preparations Directive (1999/45/EC), Environmental Impact Assessment Directive (85/337/EEC), Waste Framework Directive (Directive 2008/98/EC), Integrated Pollution Prevention and Control Directive (2008/1/EC), Landfill Directive (99/31/EC), Nitrates Directive (91/676/EEC), Wastewater Treatment Directive (91/271/EEC), Seveso II Directive (96/82/EC), Sustainable use of pesticides Directive (2009/128/EC)	1

Table 2.2: Countries in the sample

Country	Frequency
Multiple	17
UK	8
Germany	7
Ireland	5
Italy, The Netherlands	4
Spain, Denmark, Greece, Sweden	3
France, Belgium, Slovenia	2
Croatia, Cyprus, Czech Republic, Hungary, Poland, Portugal, Romania	1

Moving to the quality of the framework, the analysis revealed that the conceptual framework captures implementation performance, as defined by the existing directive-specific studies, rather well. In the first place, none of the coders assigned the 'emerging themes' code, implying that all aspects of implementation performance covered by the existing studies could be subsumed under one of the headings of our conceptual framework. Accordingly, it seems safe to conclude that this forms a complete representation of implementation performance.

Secondly, in order to assess the mutual exclusiveness of aspects within one dimension, we checked whether different framework aspect codes were assigned to the same coding unit. No such overlapping coding was found. Third, the two subsets of data displayed high intercoder reliability agreement: 75 per cent agreement for the whole framework in the first subset (column A, Table 2.3), and 95 per cent agreement in the second subset (column B,

Table 2.3)[4]. It thus seems safe to conclude that others interpret the same data in the same way, using this conceptual framework.

The next step in the analysis was to evaluate the state of knowledge on implementation performance in the field of EU environmental policy. Here, the analysis reveals that our knowledge is fragmented in three ways. First of all, we see variant coverage of the ten aspects of implementation performance in existing studies. Whereas none of the articles covered all the proposed aspects, all reported at least one aspect of the conceptual framework. 19 per cent of articles used eight of the aspects to examine implementation performance, another 19 per cent used seven aspects, followed by 16 per cent elaborating on five aspects, 13 per cent on six aspects, 11 per cent on four aspects, and 9 per cent on nine aspects. More specifically, Table 2.3 presents the relative frequency scores[5] of the conceptual framework aspects. Column C shows that the 'objectives' aspect received most attention, followed by 'expertise', 'definitional details', and 'monitoring'. The popularity of the 'objectives' aspect is not surprising: it is an intuitive first step in implementation research to examine which of the prescribed policy instruments have been put in place and applied when studying practical implementation. Much less attention, however, has been paid to the 'scope' and 'effort' dimensions of implementation performance. This is surprising, given their theoretical importance for implementation performance. Only a few articles paid attention to 'staff' and 'prioritisation' aspects. In sum, our analysis reveals important knowledge gaps in implementation performance in EU environmental policy.

Second, as already mentioned, a large proportion of the sample (32 articles) focused on the WFD (Table 2.1). Columns D and E of Table 2.3 show that our knowledge on WFD implementation performance is much more extensive than the knowledge on other directives, especially when it comes to the 'scope' and 'effort' dimensions. Another large proportion of the sample (12 articles) focused on more than one directive, i.e. multiple directives and Natura 2000 directives. Column F shows that many of these articles covered various aspects of the conceptual framework. However, little attention has been paid to the 'monitoring', 'territory', 'staff' and 'prioritisation' aspects of implementation performance.

Third, the analysis shows that our insights on implementation performance mostly stem from case studies on Western member states, which are expected to have a relatively smooth practical implementation (Falkner and Treib, 2008). According to Falkner and Treib's (2008) typology of the worlds of compliance, we divided the countries in the sample into two groups. Falkner and Treib (2008) argue that practical implementation of EU directives will run smoother in the countries of the 'world of law observance' and the 'world of domestic politics'[6] (column G, Table 2.3) than in countries of the 'world of dead letters' and the 'world

4 This is not surprising as the first type of intercoder reliability test is a more critical reliability assessment (Schreier, 2012).

5 As most articles paid attention to different aspects at the same time, the relative frequency scores do not add up to 100 per cent.

6 In this world of compliance, notwithstanding the fact that practical implementation is smooth, transposition with EU directives is contingent on domestic politics (Falkner and Treib, 2008).

Table 2.3: Data and intercoder reliability assessment (%)

		A	B	C	D	E	F	G	H
		Agreement (%)		All (%)	Directive (%)			Worlds of compliance (%)	
Dimension	**Aspect**	**Subset I** (N*=36)	**Subset II** (N*=34)	**Articles** (N*=70)	**WFD** (N*=32)	**Non-WFD** (N*=38)	**>1** (N*=12)	**Group I**** (N*=30)	**Group II***** (N*=19)
Substance	Definitional details	82	94	71	72	71	58	73	84
	Objectives	76	98	99	97	100	100	100	100
Scope	Territory	85	94	60	75	47	42	70	53
	Duration	71	92	53	66	42	58	60	42
	Addressees	68	97	63	69	58	67	70	53
Effort	Staff	92	98	19	19	18	42	13	21
	Expertise	78	92	74	78	71	67	80	79
	Budget	70	97	50	44	55	67	37	58
	Prioritisation	75	100	39	53	29	33	47	37
	Monitoring	80	97	64	63	66	42	60	68

Note: the percentages do not add up to 100% in the columns C to H as a single article focuses on different aspects in the same study.

** Number of articles in the sample; **World of law observance and world of domestic politics; ***World of dead letters and world of transposition neglect.*

of transposition neglect' (column H, Table 2.3). It seems that we know relatively less on the 'scope' dimension of the implementation performance in the countries where practical implementation was hypothesised to be more problematic (column H) than in the countries where implementation can be expected to be smoother (column G). The opposite seems to hold for the 'effort' dimension of implementation performance, where we know relatively more of this dimension of implementation performance in countries with hypothesised problematic implementation. This finding demonstrates the need to study implementation performance more systematically in order to draw better conclusions on how 'problematic'

the implementation of EU directives actually is and how seriously the implementers take EU policies. As for now, due to the fragmented nature of our knowledge on the implementation performance important information might have been omitted from its evaluation.

2.6 CONCLUSION

This paper has proposed a three-dimensional conceptual framework for studying EU implementation performance that allows for systematic analysis of variation in practical implementation, while going beyond a conventional dichotomous understanding of compliance. The validity of the theoretically deduced conceptual framework was corroborated by an extensive qualitative content analysis of previous policy-specific empirical research on the implementation of EU environmental directives.

Even though environmental policy has been often claimed to be the most extensively researched policy field, the systematic literature analysis reported in this paper revealed that our knowledge of the practical implementation of EU environmental directives is fragmented in three ways. First, so far the various aspects of EU implementation performance have been examined neither equally nor systematically. While the 'substance' dimension has received most attention in the literature, much less attention has been paid to the 'scope' and 'effort' dimensions. Second, there is a need for the examination of practical implementation of other directives than the WFD, as other environmental directives have not been examined as frequently and as systematically as the WFD. When comparing the implementation of different directives, it is important to pay attention to 'monitoring', 'territory', 'staff' and 'prioritisation' aspects, as these have received less attention up until now. And third, the analysis has revealed the need for more systematic research into countries where the practical implementation can be expected to be relatively problematic.

If the goal of research into EU environmental policy implementation, but also EU compliance, is to understand to what extent the member states really make EU policies work, there is a need for a more systematic approach to study implementation performance than has been practised up until now. If we continue to argue that there is a compliance deficit in the EU, we need to pinpoint exactly where, how and what is lacking in policy implementation. This conceptual framework can facilitate such research by offering a full-fledged conceptualisation of implementation performance.

3.

Diversity in sub-national EU implementation: The application of the EU Ambient Air Quality directive

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ABSTRACT

This paper offers an analysis of the implementation performance of the EU Ambient Air Quality directive in the Netherlands. It provides a systematic evaluation of the implementation of a procedural provision – the obligation to design air quality policy. It draws on original data on air quality policy measures that have been collected in 13 medium-sized Dutch municipalities. The analysis of differences in the implementation performance was performed using a novel three-dimensional conceptual framework. The findings illustrate great differences in the implementation performance between the municipalities. The focused comparison allowed establishing very precisely where the implementation performance is poor or even lacking, and which municipalities take their EU implementation task more seriously than others. Most puzzling, environmental problem pressure turned out not to act as a sufficient trigger for municipalities to take far-reaching air quality measures. In contrast to previous research, a more nuanced picture is painted when it comes to the concepts of 'compliance', 'non-compliance' and 'over-compliance'. A careful dissection of the implementation performance based on the aspects of the conceptual framework produces hands-on recommendations to municipalities seeking to improve their air quality policy.

3.1 INTRODUCTION

Air pollution is one of the major parameters of urban environmental quality. It has profound negative impact on human health (Gurjar et al., 2010). The European Ambient Air Quality (AAQ) Directive 2008/50/EC establishes air quality objectives to be met by the member states in order to prevent and combat air pollution. These objectives entail substantive provisions (Howlett, 2011), such as standards for the concentrations of specific pollutants in the air, as well as considerable procedural provisions, which are designed to indirectly affect the desired policy outcome through the manipulation of policy processes (Howlett, 2011). Thus, the directive calls for assessment, monitoring and sustainment of the air quality through rigorous air quality plans and obliges the member states to public communication on their air quality measures. This type of procedural provisions is increasingly used in EU environmental law (Héritier, 2002; Knill and Lenschow, 2004; Liefferink et al., 2011).

In spite of their popularity, procedural provisions have received limited systematic attention from EU compliance scholars (Bondarouk and Mastenbroek, 2018; Knill and Lenschow, 2000). However the examination of such provisions becomes especially relevant in light of a recent ruling of the Court of Justice of the European Union (CJEU) against the United Kingdom and a reasoned opinion from the Commission against Germany, both calling into question the 'appropriateness' of policy measures to combat air pollution (Article 23 of the AAQ directive). Thus, even though procedural provisions characteristically provide flexibility at the member state level as to *how* these obligations are to be implemented (Knill and Lenschow, 2004), EU institutions apparently pay very close attention to the practical implementation of such provisions.

Evaluating compliance with procedural provisions is important if one is to examine to what extent member states actually 'make EU policies work' (Haverland and Romeijn, 2007). The traditional view of compliance, where the conformity of the conduct of the regulated with legal obligations constitutes the central yardstick (Hartlapp and Falkner, 2009), seems less suitable here. According to this view, the mere fact that a member state or a local implementer lives up to the procedural obligation by producing reports or plans would already qualify the implementer as compliant. This dichotomous approach, by which compliance is juxtaposed to non-compliance, masks potentially great variance in responses between authorities and does not tell much about the extent of the domestic efforts to implement the policy (Bondarouk and Mastenbroek, 2018; Hupe and Hill, 2015).

To overcome the problem of shallow conclusions on the implementation of procedural provisions, the emphasis should be put on the differences in implementation performance between implementers of the same administrative layer, e.g. between municipalities (Hupe, 2011; Hupe and Hill, 2015; Hupe et al., 2014). Such differences in the local implementation, which are still within the boundaries left by EU directives, deserve more scholarly attention (cf.

Thomann, 2015; Treib, 2014) in order to understand how shared policy problems are jointly resolved in the EU (Bondarouk and Mastenbroek, 2018; Saetren, 2014).

This study addresses these gaps in literature. Moving beyond compliance, it elaborates on the implementation performance of medium-sized municipalities and depicts how the implementation of the AAQ directive results in tailor-made policy solutions on the ground within one member state. The objective of this paper is to evaluate the interaction between the policy leeway inherent in the AAQ directive's requirement to devise an air quality plan and its local implementation. The research question is therefore: what and how big are the differences between municipalities in using the room for discretion provided by the key procedural Article 23 of the EU Ambient Air Quality directive 2008/50/EC? A careful analysis will not only reveal differences between the municipalities but also shed light on how local air quality policy implementation compares to the obligations set out in the AAQ directive. The follow-up question of why these differences exist will, for space reasons, be shelved for another paper.

The article expands EU implementation research in four ways. First it covers a relatively understudied practical implementation stage of EU compliance at the municipal level (Treib, 2014). Second, it covers a relatively understudied area of environmental policy – local air quality policy implementation (but see Beattie et al., 2004; Carmichael and Lambert, 2011; Dorfman et al., 2010; Newig and Fritsch, 2009; Woodfield et al., 2003). Third, this article provides a systematic evaluation of the implementation of a procedural type of policy instruments, which has become a common ingredient of environmental policy. And fourth, this article provides a new way of evaluating implementation performance by using the innovative framework developed by Bondarouk and Mastenbroek (2018). The article draws on original data on air quality policy measures that have been collected in 13 medium-sized Dutch municipalities. Only the policy measures that have actually been carried out, i.e. not just those planned, are included in this study. Such analysis reveals how actively the municipalities engage in the implementation of EU air quality policy.

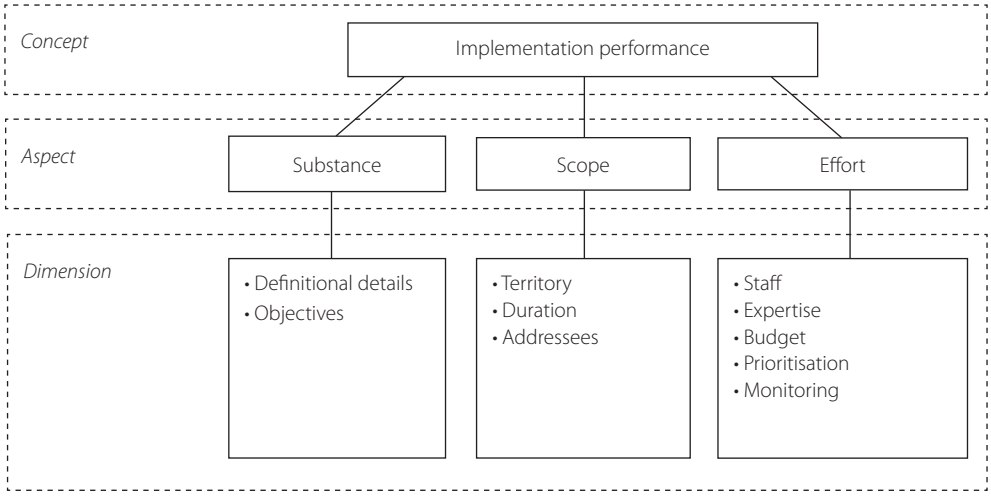
3.2 FRAMEWORK

The theoretically deduced framework introduced by Bondarouk and Mastenbroek (2018) was chosen as it enables a systematic analysis of differences in implementation performance on policies that leave a lot of leeway to local implementers. This is particularly useful when analysing procedural provisions such as air quality plans, i.e. Article 23 of the AAQ directive. Viewing the implementation of the AAQ Directive from a traditional perspective, the mere fact that there is a plan would already be sufficient to claim that implementers are compliant. However, the variety between the implementers who are tasked with the same policy deserves a closer look. Following recent literature, it should not be a surprise that local implementers

deviate from the policy set out by the national legislators, i.e. that there are 'vertical' differences between the national policy and its local translation. What remains puzzling, however, is the existence of 'horizontal' differences between local implementers (Hupe 2011; Hupe et al., 2014).

In order to systematically map such differences, Bondarouk and Mastenbroek (2018) proposed a three-dimensional conceptual framework of implementation performance. Implementation performance is the intensity of policy outputs undertaken by implementers in response to EU policy instruments – relative to the directive's benchmarks (vertical aspect) and to other implementers' outputs (horizontal comparison). The three dimensions are substance, scope, and effort. These dimensions are further refined with the help of a number of aspects (Figure 3.1). Municipalities differ on these aspects of implementation performance.

Substance, the first dimension of implementation performance, relates to the central issue that is to be regulated. The first aspect entails the objectives of the substantive and procedural requirements posed by the EU, identifying the specific requirements on-the-ground (Howlett and Cashore, 2014). Municipalities may for instance impose stricter, less strict or additional air quality norms in their own policy measures. In case of procedural provisions such as an air quality plan, objectives refer to which type or types of measures were included in the plan. The second aspect relates to the operational definitions used during practical implementation. When implementing the AAQ Directive, municipalities for instance have to define what they mean by 'appropriate' or 'good' measures, or when exemptions to the measures are at place.



Source: Bondarouk and Mastenbroek, 2018

Figure 3.1: Conceptual framework

The second dimension of implementation performance concerns the *scope* of implementation: where, when and to whom does the policy task apply. The first aspect is the territory to which the policy task applies, e.g. a whole region, an entire municipality or only specific areas in a city. The second aspect is the temporal scope, or duration of the policy task, i.e. when did the air quality measures come into force and/or to which period do they apply. The final aspect of scope examines how broad or specific the group of addressees targeted by the policy measures is.

The final dimension focuses on the *effort* implementers put into accomplishing a policy's goals and consists of four aspects. First, the number of designated staff relates to how many people in the municipality are responsible for formulating and carrying out the relevant policy tasks. Second, the types of expertise involved in policy implementation address the type(s) of knowledge consulted during air quality policy task formulation. The third aspect of effort is the amount of financial resources, expressed for instance as the percentage of an implementer's budget, allocated to the implementation of air quality policy goals. The fourth aspect is the prioritisation[7] of goals or measures within one policy, given the limited availability of resources. The final aspect refers to the monitoring for ensuring that the policy measures are complied with. It stipulates how a municipality will assess the quality of the delivered task and how it envisions controlling for policy adherence.

It should be noted that the framework by Bondarouk and Mastenbroek (2018) does not exclude interdependence between the aspects. For example, a municipal allocated budget to implement a policy might affect its ability to come up with monitoring. Such correlations are however not a concern for this paper, as it only aims to measure the implementation performance and not to explain it.

3.3 RESEARCH DESIGN

Case selection

The Netherlands have been chosen for this study as the AAQ directive gave rise to implementation problems in a lot of Dutch municipalities (Busscher et al., 2014). The implementation problems were associated in particular with the close coupling of air quality requirements and spatial planning. All new spatial planning projects had to be assessed with a view to their contribution to air pollution, leading in several cases to serious delay or even termination of the project (Carmichael and Lambert, 2011). Hence, economic growth in the municipalities was threatened by air quality policy.

At the same time, the Netherlands present a typical case for the investigation of air quality policy. As almost all other EU municipalities, Dutch municipalities have a mandate in air

7 Prioritisation refers to the priority assigned to specific policy goals *within one policy*. This is not to be confused with the concept of 'saliency', which reflects the priority dynamics *between different policies*.

policy and were faced with air pollution challenges (Busscher et al., 2014). In contrast to municipalities of big member states, however, Dutch municipalities are very comparable in terms of geography and sources of air pollution. Thus, Dutch municipalities were faced with largely similar conditions, and therefore could potentially take the same measures (Busch et al., 2012; Busscher et al., 2014).

This study focuses on medium-sized municipalities. First, these municipalities represent a large portion of society in the Netherlands as well as elsewhere. Second, these municipalities often face air quality problems that are very similar to those of the largest municipalities. While the latter received most scholarly attention (Gurjar et al., 2010; Mayer, 1999), medium-sized municipalities were largely neglected. And third, they form a large homogeneous group with similar air pollution sources, making them an almost ideal sample for horizontal comparison. All 13 municipalities in the Netherlands having between 150 thousand and 340 thousand inhabitants were selected for this study.

The analysis was based upon policy plans on air quality, mobility, parking policy, public transport and sensitive destination policies. The evaluations of these plans, annual financial reports and 18 interviews with municipal policy officers and local civil society organisations informed the analysis. In total 237 documents were covered. The time frame of policy implementation was kept rather wide – from 2000-2015, in order to fully account for the air quality measures on the ground. In some municipalities, a particular measure might have been taken already prior to 2008 AAQ directive, whereas other municipalities only started to implement at a much later moment.

The information was gathered on 8 out of the 10 aspects introduced above (see Figure 3.1). For two aspects – staff and budget – it turned out to be impossible to gather comparable and meaningful data because air quality policy measures usually transcend the departmental structures of municipalities. The financial department, the environment affairs department and the mobility and traffic department were usually involved in the design of policy measures. Some of those only invested a few hours per year on the matter, e.g. the financial department employees who consulted the environmental department on the public procurement rules on the new public transport. Concerning budget, air quality policy measures could for instance be paid from the mobility department budget as many of the measures were directly related to mobility improvement measures. Trans-departmental made it impossible to isolate staff and budget allocated to air quality specifically. It must be noted that these problems relate to the strongly cross-sectoral nature of air quality policy. For many other EU policies it is likely to be easier to trace data on staff and budget.

Scoring air quality plans and measures

In order to analyse air quality policy implementation performance, the data on the remaining 8 aspects were collected on two levels: the air quality *plan* as a whole and 25 individual air quality *measures*. In all instances, scores were assigned from 0 to 3. The scoring allowed for

a focused comparison across the 13 municipalities. The division between the individual measures and the plan as a whole was necessary to prevent the scores on the 25 individual measures from overshadowing the scores on the overall plan. Weighing the scores would have been an option, but the weighing factors would inevitably have remained arbitrary for four reasons. First, the importance of plans versus actual measures depends on a complex amalgam of political, institutional and cultural factors, which are very hard to disentangle. Second, there is no academic consensus on which measures prove to be in general the most effective (Knill et al., 2012; Van Stigt et al., 2016). Third, the effectiveness of single measures is hard to determine as a combination of measures is usually employed to tackle environmental problems (Howlett, 2011). Finally, the applicability and effectiveness of any individual air quality measure is highly sensitive to the specific geographical context (Vlachokostos et al., 2011). Therefore, refraining from weighing the scores seemed to be most proper solution.

On the plan level, data for the 'duration' aspect were collected but not elaborated upon, as we are interested in whether the policy measures have actually been taken at all (as opposed to when exactly they were planned). The effort aspects of 'expertise' and 'prioritisation', in contrast, were only measured for the plan as a whole and not for the individual measures, as these effort aspects could be related to the plan level only.

Appendix B elaborates on how the scores on the overall policy *plan* were assigned. A long-list of all possible policy practices was developed inductively and differentiated by aspect of the implementation performance framework (e.g. objectives, territory etc). A policy plan received a higher score per aspect of the framework if more descriptions from the long-list of policy practices could be 'ticked' for the city at stake. The scores were added up to form a score per municipality.

In order to analyse individual air quality policy *measures* a long-list of all possible policy measures was developed inductively. Twenty-five possible measures were identified, which were subdivided into six categories of measures: (1) public transport, (2) prevention of cars in the city, (3) bicycle policy, (4) stimulating the demand for alternative transportation, (5) information to the public and (6) sensitive destination measures. Such aggregation was done to ease the comparison between the municipalities. The categories were cross-checked with other reports on the possible types of air quality measures (Fransen, 2012; Van Oort and Van Oort, 2012; Van Rij and Brink, 2013).

All twenty-five policy measures in all 13 cities were scored individually. Per individual policy measure there was again a long-list of all possible policy practices developed inductively and differentiated by aspect of the implementation performance framework. As for the plan level, a policy measure received a higher score per aspect if more descriptions from the long-list of all possible policy practices could be 'ticked' for the city at stake. This eventually allowed for a comparison of the implementation performance on the ground between the 13 cities. To produce an aggregate score for one of the six categories of measures, the scores on the individual measures of the same category were added up. In a similar vein, an aggregate score

per aspect of implementation performance was derived by adding up the scores for that particular aspect across all categories. The scores of municipalities could then be compared on the categories of air quality measures as well as on specific aspects of implementation performance. Also, a total score on all six categories could be drawn up. Appendix C provides the extensive codebook that was developed for the measurement.

3.4 THE DUTCH POLICY CONTEXT FOR MUNICIPAL AIR QUALITY POLICY

Before delving into specifics of the Dutch case and the responsibilities of municipalities and national government, a few details about the directive's Article 23 are at place. Article 23 stipulates that where limit values are exceeded, member states should make an air quality plan containing appropriate measures aimed at keeping the exceedance period as short as possible. The plans may additionally include specific measures aiming at the protection of sensitive population groups. The plans and the information on their implementation should be made publicly available.

In the Netherlands, the AAQ directive has been transposed into the Environmental Protection Act (EPA), which lays the basis for the National Air Quality Cooperation Programme (NAQCP). The NAQCP has been communicated to the Commission as the national policy plan to combat air pollution, and served as the ground for the Commission's decision to postpone the deadline for compliance for the Netherlands. This means that the limit values for particulate matter 10 had to be reached by mid-2011 (instead of 2005) and those for NO_2 by 2015 (instead of 2010). Apart from this derogation, the limit values are the same as in the EU directive. Although the directive and the transposition focus on other pollutants as well, the NAQCP identifies these two as the only pollutants still being exceeded in the Netherlands.

Next to the standards, the NAQCP lists all national and municipal air quality measures. The national authorities are responsible for monitoring the air quality through a national sampling system, overseeing the progress of local air quality plans' implementation, and communicating the air quality status to the public. Hence, according to the EU directive, municipalities are not obliged to monitor air quality and report the policy measures to the public, as the national government is already seeing to that. In addition, national authorities are responsible for managing the pollution at the national highways, while municipal roads are a responsibility of the local authorities. The national authorities have also committed to limit the growth of sensitive destinations, i.e. schools, kindergartens, nursing and retirement homes, next to national and provincial roads. There is no binding regulation to undertake similar measures along municipal roads. The national authorities allocated 372 million Euros to local authorities for the air quality measures.

The municipal authorities submitted their local air quality action plans to the NAQCP. While some municipalities were very specific, others provided only a general outline of the

measures to be taken. The municipalities are obliged to implement all the measures they have listed under the NAQCP; otherwise, they would have to pay back the funding granted by the national authority. At the same time, they are allowed to take extra policy measures besides those specified under the NAQCP. According to the NAQCP calculated forecast of 2008, four cities in our sample, i.e. Utrecht, Eindhoven, Nijmegen and Arnhem, would still exceed air pollution limits by 2015. Strictly speaking, from the sample of 13 cities, these are the only 4 cities that were obliged to take air quality measures according to the AAQ directive.

Overall, this means that each municipality is bound to a different list of measures. Municipalities, moreover, basically drew up these lists themselves. It can therefore be concluded that they enjoy a large discretion in the implementation of the AAQ directive.

3.5 FINDINGS AND DISCUSSION

The objective of this paper is to evaluate the interaction between the policy leeway inherent in the AAQ directive's procedural requirement to devise an air quality plan and its local implementation, and by doing so to demonstrate what differences exist in the local implementation of AAQ directive. This ultimately contributes to our understanding of how member states actually 'make EU policies work'. This section starts out by comparing local air quality policy implementation to the obligations set out in the AAQ directive. Afterwards the question of differences between the municipal implementation performances is dealt with. As a few municipalities were predicted to face continued exceedance of the limit values, we specifically pay attention to their implementation performance. In addition, we zoom in on the performance of relatively bigger versus relatively smaller cities in our sample. Finally, this section reflects on the use of the implementation performance framework, which is first employed in this paper.

Local air quality policy implementation versus the AAQ directive and the Dutch transposition

When it comes to formal compliance with the AAQ directive, all 13 municipalities comply with the requirement of having a plan. Also when it comes to meeting the air quality standards, the municipalities have almost entirely managed to achieve the deadlines for the specific pollutants[8]. Recalling the Dutch air pollution problems prior to the AAQ directive, this achievement is remarkable as such. One possible explanation for this could be the way the Netherlands have organised the practical implementation. Both 'carrots' and 'sticks'

8 According to 2015 measurements there are single sample points in Utrecht, Eindhoven, Tilburg and Arnhem where limit values are exceeded. In each case, this concerns one section of a street where concentrations of nitrogen dioxide exceed the annual limit of 40 µg/m3. In 2008, forecast calculations indicated that Utrecht, Eindhoven, Arnhem and Nijmegen would face pollution exceedance. While Nijmegen managed to completely eradicate exceedance of the standards, Arnhem, Utrecht and Eindhoven were not entirely successful in doing so, but it should be stressed that this exceedance concerns fractions of a single street.

were provided in the NAQCP: the municipalities had to take action and were not allowed to engage in spatial development projects if exceedances were expected, but at the same time the municipalities received financial assistance to implement their AAQ measures. The fact that the municipalities were involved in the NAQCP design from the beginning could be conducive to this compliant behaviour (Howlett, 2011).

More interestingly, however, the data show various situations where municipalities seem to do more than necessary. We can distinguish over-compliance relative to the EU directive and over-compliance relative to its national transposition. In addition to that, there are many differences on a horizontal level, suggesting that some municipalities take the implementation task of air quality policy more seriously than others without being over-compliant in a strict sense of the word. We will discuss these situations in more detail now.

First, over-compliance relative to the AAQ directive occurs with regard to a substantive provision: six municipalities (Nijmegen, Tilburg, Almere, Groningen, Breda and Haarlem) aimed for stricter standards on particulate matter 10 and nitrogen dioxide than those stipulated by the directive as well as its national transposition. This must be taken as a clear form of over-compliance in local practice. Furthermore, two municipalities (Nijmegen and Groningen) took an extra pollutant into account - soot, which is neither mentioned in the EU directive nor in the national transposition. As soot is in fact a sub-particle of particulate matter 10 and as such covered by the directive, this can hardly be considered as a substantive local 'topping' of national or EU rules. It however demonstrates that some municipalities have taken air quality concerns a step further by doing their own specific research on the important ingredients of particulate matter 10 and addressing it in their policy measures.

Second, over-compliance relative to the national transposition of the directive can be seen as some municipalities have established their own air quality monitoring system and provide information to the broader public on their policy measures, despite the fact that the national authorities already take care of this. The Netherlands, in other words, already complied with the AAQ directive on these points on the national level. Five municipalities have their own air quality assessment system in place. Except Almere all cities engaged in information provision. Nijmegen, Amersfoort and Utrecht even scored quite high within this category (see Table 3.1). Moreover, without being formally obliged to do so, four cities have taken extra local measures to prevent the growth of sensitive population destinations next to busy municipal roads (see Table 3.1). This finding again shows that municipalities may be willing and capable of going a step further than necessary, indicating that national expectations are not always dashed locally (cf. Pressman and Wildavsky, 1984).

Third, there are several cases where neither the EU directive nor the national transposition of the directive specify exactly which measures are to be taken. Also in those cases, data show that municipalities differ in their implementation performance. This for instance entails endeavours in the area of bicycle policy, which considerably diverge across cities (see Table 3.1). This grey area of discretion is exactly the room the municipalities can use to fit

the measures to their local circumstances and to do more than an average municipality. This cannot be regarded as over-compliance because the point of reference for deciding whether compliance or over-compliance is at stake at all, is missing. The only conclusion to be drawn here is that some municipalities take their implementation task more seriously than others.

In this context, it should be noted that the Netherlands is a unique case as municipalities were invited to develop their own air quality measures, which were then included in the NAQCP and subsequently became binding upon the municipality concerned. Nevertheless, the comparison of the local measures laid down in the NAQCP and actual local implementation is not a good starting point to determine over-compliance, as there is an obvious strategic interest of the municipalities not to promise too much in the NAQCP or to use rather vague terminology. At the end of the day, the measures taken in practice at the local level have to be decisive for determining implementation performance.

Differences between cities: municipal policy plans and individual policy measures

The analysis reveals that there are more differences between the municipalities with regard to the implementation performance of individual air quality measures than with regard to the air quality plan as a whole.

The aspects of 'territory' and 'addressees' of the air quality plan turned out, not totally unexpectedly, to be the same for all municipalities in the sample. Without exception, the plans were applicable to the whole municipal area and addressed the whole municipal population. As all municipalities identified 'road traffic' as the source of pollution, there were no horizontal differences on the 'definitional details' aspect either[9]. All cities prioritised circulation measures, nitrogen dioxide and particulate matter 10, and local bottlenecks where air quality standards were threatened to be exceeded. Moreover, apart from four cities which have taken additional sensitive destination measures, all identified the same categories of policy measures to combat air pollution (see Table 3.1). This finding suggests that there might be a lot of communication and knowledge exchange between the municipalities. Even though the Netherlands have a national air quality plan, all municipalities were free to take their own measures. It remains to be seen what role the national government and the NAQCP played in stimulating such uniform approach.

9 Only Nijmegen identified water transport as an important source of pollution. However, most of the cities in the sample do not have a water body with a busy traffic. Therefore, such comparison becomes problematic in view of geographical differences.

Table 3.2: Categories of ambient air quality measures

Municipality	Plan as a whole	Total AAQ measures	1. Public transport	2. Prevention of cars in the city	3. Bicycle policy	4. Demand for alternative transportation	5. Information to the public	6. Sensitive destination measures
Utrecht	14	141	31	38	42	17	13	0
Eindhoven	14	151	36	31	35	32	9	8
Tilburg	15	151	28	34	38	31	12	8
Almere	11	123	31	29	33	30	0	0
Groningen	14	143	39	33	45	16	10	0
Breda	14	130	20	34	27	33	8	8
Nijmegen	16	158	33	34	34	36	21	0
Enschede	12	138	37	24	39	26	12	0
Apeldoorn	13	97	20	15	32	24	6	0
Haarlem	14	141	31	32	35	33	10	0
Arnhem	12	126	32	34	24	29	7	0
Amersfoort	12	119	15	15	33	29	18	9
Zaanstad	13	104	27	25	21	18	13	0

Note: the municipalities are listed according to their population size, Utrecht being the largest and Zaanstad being the smallest in the sample.

When it comes to individual air quality measures, a high variation between municipalities can be observed regarding both different aspects of implementation performance (see Table 3.2), and different categories of policy measures (see Table 3.1). The 'addressees' aspect accounts for the largest inter-municipal difference, with Eindhoven scoring 17 and Apeldoorn only 6 points, implying that the measures taken in Eindhoven apply to a considerably wider group of addressees than measures taken in Apeldoorn. When comparing municipalities on the six categories of AAQ measures, Nijmegen took a lot of effort to ensure that the public was informed on the air quality measures that were taken and the air quality status in the city (21 points), while Almere did not do anything in this category of measures (0 points). Although, as discussed above, municipalities exhibit considerable similarities regarding the categories of measures they take, this finding implies that within these categories municipalities may opt for tailor-made strategies to combat air pollution. Even though all are compliant, some

municipalities took a step further in reducing air pollution than their local peers. In this context, it should be remembered that World Health Organisation recommendations for air quality are twice as strict as EU limit values. To what extent this municipal activism could be attributed to, for instance, more ambitious environmental policy traditions (cf Lee and Koski, 2012; Wood et al., 2014), active interest groups (cf Lee and Koski, 2012; Treib, 2014) or policy entrepreneurs (cf Kingdon, 2014; Meijerink and Huitema, 2010) will be examined in future research.

Four municipalities with predicted bigger air pollution

Four cities in our sample had to take extra measures, i.e. Utrecht, Eindhoven, Nijmegen and Arnhem, as they were expected to face particularly persistent air quality problems. It seems logical to assume that they would do more than other municipalities in the sample that were not predicted to have a similar problem pressure. However this is not exactly what the data show (see Table 3.1). Nijmegen and Eindhoven have indeed higher scores on the measures, indicating that they have done more than other cities. However, there are three cities - Tilburg, Groningen and Haarlem - which scored higher than Utrecht (141 points) or the same without having the same environmental pressure to do so. Groningen, where limit values had never been exceeded, was not even a member of the NAQCP, which means that there was neither an obligation to take any measures at all nor any financial support from the NAQCP. At the same time Arnhem, having a predicted environmental pressure, ranks no higher than fifth from the bottom. This is very surprising as a presence of problem pressure is apparently not enough for the municipalities to undertake vigorous air quality measures. Specific local factors must be held responsible for this and will be addressed in further research.

Larger versus smaller municipalities

A pattern emerging from this sample that is less surprising is the notion that smaller municipalities tend to score lower on both the individual measures and the air quality plan as a whole. This suggests a relationship between the capacity of an implementing actor and its implementation performance (Treib, 2014). However this relation does not seem to be fully symmetrical as being a bigger municipality does not suffice to score higher on the air quality policy implementation performance (see Tables 3.1 and 3.2). There are two deviant cases: Haarlem is the fourth-smallest municipality in our sample but has the same score as Utrecht (141 points), which is the biggest among our 13 cities. Almere is the fourth-largest municipality but has the fourth-lowest score in the sample. These cases are in line with EU compliance research, suggesting that capacity does not automatically lead to better compliance or performance as the willingness to implement also plays a role (Knill and Lenschow, 1998; Treib, 2014).

Table 3.3: Aspects of implementation performance

Municipality	Plan as a whole	Total AAQ measures	Objectives	Definitional details	Territory	Addressees	Duration	Monitoring
Utrecht	14	141	12	51	33	14	36	5
Eindhoven	14	151	15	49	30	17	36	4
Tilburg	15	151	16	49	31	15	36	4
Almere	11	123	10	41	31	12	26	3
Groningen	14	143	12	48	30	12	39	2
Breda	14	130	15	43	25	14	29	4
Nijmegen	16	158	12	58	34	12	39	3
Enschede	12	138	12	42	31	11	39	3
Apeldoorn	13	97	8	32	20	6	28	3
Haarlem	14	141	13	46	29	12	38	3
Arnhem	12	126	12	42	25	13	31	3
Amersfoort	12	119	14	39	20	11	32	3
Zaanstad	13	104	10	35	24	8	24	3

Note: the municipalities are listed according to their population size, Utrecht being the largest and Zaanstad being the smallest in the sample.

Reflection on the implementation performance framework

As this paper first employs the framework for assessing implementation performance developed by Bondarouk and Mastenbroek (2018), we reflect on its merits. First, with the help of this framework, the analysis paints a more diverse picture of implementation reality than a dichotomous notion of compliance could have done. According to the latter, all municipalities would have been classified as compliant, without doing justice to the empirical diversity which is crucial to understanding how member states make EU policies work.

Secondly, this framework allows a more precise identification of the best performing implementer. If one were to look only at the number and types of measures taken against air pollution (i.e., in terms of this paper, total objectives of individual measures), which has been the predominant way of studying implementation (Bondarouk and Mastenbroek, 2018), Tilburg would be the best performing municipality with a score of 16 on objectives (see Table 3.2). When considering the entire range of aspects of implementation performance covered by the conceptual framework, Nijmegen appears as the best implementer with a total score of 158 points, while its objectives score of 12 points remains behind that of Tilburg. Nijmegen has put a lot of effort in substantiating the measures, implementing them on a wider scope

and being one of the frontrunners to carry out the measures. Nijmegen also scores highest on the total air quality policy plan (see Tables 3.1 and 3.2), due to the stricter norms and by being one of the five municipalities having their own assessment system to monitor air quality.

Third, a dissection of policy implementation into aspects and categories of measures allowed establishing where the implementation performance was lacking vis-à-vis other municipalities and gave insights into what potential improvements could look like. For example, a municipality that has the highest score on total individual air quality measures does not necessarily lead in each distinct category of AAQ measures. Nijmegen being the best overall scorer only leads in two out of six categories of air quality policy measures (see Table 3.1). In this way, the framework assists in isolating weaker links in the implementation performance.

And finally, this framework allowed moving beyond commitments on paper to systematically digging into the implementation practices of municipalities. When comparing the scores on the air quality policy plan with the scores on the total individual measures it becomes evident that having a well-scoring policy plan does not always predetermine a high score on total individual measures (see Table 3.1). Utrecht, Eindhoven, Groningen, Breda and Haarlem have equal scores on the plan as a whole, but have very different scores on the individual air quality measures. Almere performed poorer than Apeldoorn on the plan as a whole, but much better on individual air quality measures. Enschede is yet another example where the municipality scored poorly on the policy plan as a whole but rather well on the individual measures. This suggests that considerable differences may exist between plans on paper and measures carried out in reality. This framework facilitates looking deeper into practical implementation and assessing which local implementers really make EU policy work.

3.6 CONCLUSION

The analysis of municipal implementation of the EU AAQ directive revealed differences even within one member state. Although the 13 medium-sized Dutch municipalities in our sample were all technically compliant with the directive, they differed on various aspects of implementation performance. The focused comparison allowed establishing the overall top and bottom scorers of air quality policy implementation. Dissecting air quality policy into different categories of measures, however, another top three emerged for each category of measures. Such differentiated approach to implementation performance produces hands-on recommendations to the municipalities seeking to improve their air quality or to catch up with the other municipalities. It becomes relatively easy to demonstrate where the implementation performance is poor or even lacking.

This study demonstrates that there are different forms of over-compliance: over-compliance relative to the EU directive and over-compliance relative to its national

transposition. In addition, the sample shows that some municipalities take their implementation task more seriously than others. The latter should however not be confused with over-compliance as in these cases, there were no specific measurable obligations neither in the EU directive nor in the national transposition. What is at stake here is essentially a matter of filling in the available room for policy discretion. It is highly likely that such notions of over-compliance and discretion are present in the implementation of other directives as well. This may constitute a puzzle for future research.

Surprisingly, the municipalities scored equally on 'definitional details' and 'prioritisation' at the level of air quality policy plans as a whole. Another remarkable similarity between the municipalities is that, despite of high discretion in the implementation, most undertook the same categories of policy measures to combat air pollution. This suggests a basically similar coping behaviour by local implementers and trans-municipal information exchange. Such convergence could be hypothesised to be present in the implementation of other procedural policy instruments as well, as faced with uncertainty about the effect of their measures implementers could be expected to bundle their efforts and exchange information to effectively combat environmental problems, leading to similar solutions on the ground (Joergens et al., 2014; Veenman and Liefferink, 2014). Future research should address how differences in discretion may affect policy convergence at the ground level.

At the same time, a more in-depth evaluation shows a lot of differences. Some particularly interesting patterns emerged from the data. First, and most puzzling, environmental problem pressure did not act as a sufficient trigger for a municipality to take far-reaching air quality measures. Further research could help to understand the conditions for this phenomenon. Second, smaller municipalities tend to have a lower score on implementation performance than bigger municipalities. This is less surprising, as other research has also shown that resources play an important role in implementation performance (Treib, 2014). At the same time, there were two outliers that deserve further investigation. And third, balancing the more general finding that the categories of measures taken by municipalities tend to be largely similar, more fine-grained differences in implementation performance imply that some municipalities took a step further in reducing air pollution than their local peers.

This research did not aim at establishing a link between scores on the implementation performance and actual air quality improvement, thus relating policy output to policy outcome (see Knill et al., 2012). Which policy measures work best to improve air quality is an entirely different question, which should be analysed differently. It remains a highly pertinent question though, especially since research has shown that EU air quality standards are in fact too low to adequately protect human health (Brunekreef et al., 2012). This is also reflected in the fact that WHO recommendations regarding air quality are twice as strict as the current EU standards. Therefore even in Nijmegen, which adopted more ambitious air quality policies than comparable cities in the Netherlands, air quality might, after all, be insufficient.

This paper was the first to empirically apply the framework to measure implementation performance developed by Bondarouk and Mastenbroek (2018). A traditional conceptualisation of implementation would have only focused on the objectives aspect of implementation performance and would have yielded very different results, e.g. regarding the best performer. Instead of branding one implementer as the best performer based merely on the fact that it took most measures, the present framework took into account how the measures were defined as well as where, to whom and since when they applied. This resulted in a considerably more nuanced picture of implementation. Employing the framework also enabled studying the policy measures that were actually taken in contrast to those committed only on paper. As this paper revealed remarkable differences between policies on paper and policies in action, we encourage further research into this topic in order to see to what extent member states really make EU policies work.

In the particular case of air quality, not all aspects of implementation performance turned out to be equally fit for analysis. For two aspects, staff and budget, it proved problematic to gather meaningful data. This had to do with the departmental structures of municipalities in combination with the strongly cross-sectoral nature of air quality policy. This interconnectedness enables municipalities to pool resources from different departments to implement more policies with the same budget. How this impacts the goals of each related policy needs to be addressed in more detail.

This paper has painted a more complex, richer and more nuanced picture of implementation of EU environmental directive at the lowest administrative layer of government. It has offered a considerable number of puzzles for future research. Further research, moreover, is needed to examine how Dutch municipal implementation performance compares to local implementation in other EU member states. Air quality has been a very salient topic in the Netherlands. Municipalities cooperated on the design of NAQCP from the beginning and have received funding from the national government. These factors might have contributed to municipal mobilisation on this policy issue. How the interrelation between the requirements contained in the AAQ directive, national transposition and local implementation impacts the implementation performance regarding air quality would be most interesting to see.

4.

Politics or management? Analysing differences in local implementation performance of the EU Ambient Air Quality directive

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ABSTRACT

As far as local governments are responsible for the practical implementation of many European Union (EU) policies, they co-determine member states' EU compliance records and the fate of EU legislation. Yet, they do so in remarkably different ways, as exemplified by the variegated implementation of the Ambient Air Quality Directive 2008/50/EC by Dutch municipalities. Taking guidance from the literature on EU compliance, in this article we explain the differences in local implementation performance based on the political and managerial approaches. Understanding which of the two approaches drives different local responses to EU policy bears consequences for the appropriate remedy for non-implementation. Four municipalities were purposefully selected along with the two-by-two implementation performance scoring matrix in the realm of air quality. A comparative within-case analysis specifies how political explanations outweigh managerial explanations in accounting for variation in implementation performance and distils 'policy saliency' as the driving causal mechanism.

4.1 INTRODUCTION

Local governments are responsible for the practical implementation of many European Union (EU) policies. Urban Waste Water Treatment Directive (91/271/EEC), Environmental Noise Directive (2002/49/EC) and Ambient Air Quality Directive (2008/50/EC) are just a few examples of EU policies affecting local governance. While the European Commission initiates this legislation it has little enforcement capacity on its own and has to rely on the member states and their constitutive levels of government to ensure that this legislation is put to practice. This begs a classic question to what extent the Brussel's expectations are dashed locally (cf Pressman and Wildavsky, 1984). Yet, the EU compliance literature has paid little systematic attention to the local implementation of EU policies (Treib, 2014; Versluis, 2007). This lack of systematic attention is surprising as analysis of local implementation is instrumental to understanding how do member states make EU policies work (Thomann and Sager, 2017).

Recent studies on the local implementation of the EU Ambient Air Quality Directive 2008/50/EC (AAQ) in the Netherlands revealed that there is great variation in policy responses at local level (Bondarouk and Liefferink, 2017; but also see a description of German local implementation variation - Gollata and Newig, 2017). Besides setting minimum procedural obligations, like drawing a management plan, monitoring air pollution and informing the public on the state of pollution, the directive leaves it up to the implementers how to go about it (Bondarouk and Liefferink, 2017; Gollata and Newig, 2017). While faced with the same regulatory pressure, some Dutch municipalities took more extensive measures than others (Bondarouk and Liefferink, 2017). Accordingly, a pattern of local pioneers and laggards – those who do more and those who do less – emerges (Lee and Koski, 2012; Liefferink et al., 2009; Liefferink and Wurzel, 2016; Urpelainen, 2009). The local differences in air quality policy efforts are even more surprising considering that the Dutch national government reserved 372 million euros for local air quality measures. All municipalities were invited to stake a claim to these subsidies. In light of the same regulatory pressure and available financial resources, the question arises – how can these differences in local implementation of EU AAQ policy be explained?

EU compliance research has shown that national differences in compliance at transposition level – the level where EU legislation is transposed into national law – can be largely explained by domestic politics (Mastenbroek and Kaeding, 2006; Treib, 2014). Whether this politicisation of EU policies can also account for differences in *local* implementation is yet to be determined (Treib, 2014). Alternatively, the management approach in EU compliance research views implementation as a matter of managerial capacity and the way policy implementation is organised (Walker and Andrews, 2013).

While both explanatory approaches have merit, it is important to understand which of the two approaches drives different local responses to EU policy. If political explanations outweigh managerial ones, the remedy for non-implementation is fundamentally different.

Where the political approach assumes that strict enforcement mechanisms can remedy non-implementation, the management approach advocates for capacity-building strategies (see Tallberg, 2002). If one sets to improve local implementation of EU directives, we first need to understand which of the two approaches drives different local responses to EU policy. Hence, in this paper we address the following research question: *to what extent can differences in Dutch local implementation of EU directive be attributed to politicisation or managerial considerations?*

This study offers an empirical and theoretical contribution to the literature. Empirically, by putting local government at the centre of this research we address the empirical gap in EU compliance literature (Thomann and Sager, 2017; Treib, 2014). Furthermore, compared to Water Framework Directive, AAQ directive has received less scholarly attention (for overview see Bondarouk and Mastenbroek, 2018).

When it comes to theoretical contribution, by examining whether the explanatory variables identified for the variation in national compliance with EU policies also hold in the local context we explore the strength of implementation theory (see Saetren, 2014: 86; Winter, 2012: 265). Additionally, so far both managerial and political explanations have been analysed mainly for the *timeliness* of EU national implementation, i.e. whether EU legislation has been translated into national law according to EU deadlines (see for an overview Treib, 2014). Alternatively, we focus on the *content* of policy implementation, i.e. the policy measures that local government have taken in light of AAQ directive. Thus we enrich our understanding of the explanatory variables by examining them in a different conceptual context. By employing theory-driven process tracing over a period of *ten* years of local implementation in several Dutch municipalities, we identify the *sequence* of explanatory variables. We thus illustrate *how* the variables interact and affect implementation performance.

In analysing the antecedents of EU implementation performance, this study focuses on the local implementation of the EU AAQ Directive in the Netherlands. Bondarouk and Liefferink (2017) provide a database of Dutch local AAQ policy output. Following distribution-based most diverse case selection on the dependent variable (Rohlfing, 2012), we selected two highest and two lowest scoring municipalities from the database developed by Bondarouk and Liefferink (2017). The selection on the dependent variable is driven by our interest in what explains different outcomes on the dependent variable, in this case implementation performance. A selection of only medium-sized municipalities offers a focused comparison, as they form a rather homogeneous group with similar air pollution sources, i.e. traffic, making them an almost ideal sample for horizontal comparison. These Dutch municipalities enjoyed equal access to the national subsidies for AAQ measures and experienced the same amount of steering from the national government.

The next section sets out our conceptualisation of the dependent variable – implementation performance. Afterwards, our expectations are outlined with regard to political and management explanations. We address the case selection, operationalisation

and analysis techniques in full detail in the following section; give short descriptions of the four cases before moving on to findings and conclusions.

4.2 DELVING INTO POLITICAL AND MANAGEMENT THEORETICAL APPROACHES

Before we delve into the differences between political and management approaches, we first need to address the conceptualisation of local implementation performance. Local implementation of EU policies refers to the stage where local governments put EU law into practice – 'translate policy into action' (Barrett, 2004: 251). The way local governments perform during local implementation can be understood in terms of policy outputs – i.e. the regulatory actions taken in response to law – or in terms of policy outcomes or impact - i.e. the question of whether a policy indeed resolved the problem it set out to solve (for literature review see Bondarouk and Mastenbroek, 2018: 17; Knill et al., 2012; Tosun, 2012).

An evaluation of EU policy impact is extremely challenging, due to the fact that an isolation of the EU effect is practically impossible (Bauer and Knill, 2014; Haverland, 2006; Tosun, 2012). Hence one quickly faces 'construct validity concerns' when one tries to causally link EU policy with actual local state of environmental pollution (Tosun, 2012: 442-444). Instead, a growing number of scholars have suggested focusing on policy outputs in order to assess more directly what the implementing actors do to mitigate the policy problem (Bondarouk and Mastenbroek, 2018; Knill et al., 2012; Liefferink et al., 2009; Tosun, 2012). As in this paper we are interested in the differences between local policies in response to an EU directive, we follow Bondarouk and Mastenbroek (2018) and conceptualise implementation performance in terms of *policy outputs*.

An assessment of policy outputs presupposes a firm understanding of policy measures: the techniques by which authorities attempt to change or maintain the policy status quo (Howlett et al., 2009; May, 2003: 225; Schaffrin et al., 2015). These measures are then examined on the content i.e. the breadth and differentiation of policy responses (Bauer and Knill, 2014: 33; Knill et al., 2012). Hence, we define implementation performance as the comprehensiveness of policy outputs undertaken by local implementers in response to EU AAQ policy obligation. Thus we are interested in explaining why local policy output in one municipality is more elaborate than in another.

The political and management approaches to explaining implementation performance have two different points of departure: respectively the willingness and the ability to implement (for an extensive literature review, see Hill and Hupe, 2014). The political approach stresses the importance of political will to implement policies. Politics determine the allocation of values and the distribution of benefits and costs (Kingdon, 2014: 145). Therefore, implementation

performance is seen to reflect a deliberate choice. National policy makers, in response, can remedy low implementation performance by strict and coercive enforcement (Tallberg, 2002).

The management approach, by contrast, assumes that implementation is not a matter of calculated willingness, but of implementers' capacity to do so (Tallberg, 2002; Treib, 2014; O'Toole and Meier, 2010). Sound management has been argued to make a significant difference to policy implementation (see for an overview Meier et al., 2007: 369; O'Toole and Meier, 2009: 499). Low implementation performance is then attributed to implementers' ability to implement, rather than their willingness to do so. Based on these assumptions, implementation can be improved by investing in capacity building (see Tallberg, 2002).

In the remainder of this section we present the political and managerial variables to account for variance in implementation performance. However, we do not claim to list all potential variables - 'as has been widely recognised dozens of variables are relevant to implementation action' (O'Toole, 2017: 377). We specifically focus on a few variables, which we would like to subject to empirical investigation. For both approaches, the variables were selected that have been repeatedly identified in different literature reviews to correlate with comprehensive implementation performance. Such focused theory testing is embedded in the current 'third-generation implementation research' (for an overview see Hupe and Saetren, 2015; Saetren, 2014). Instead of trying to be as complete as possible in theoretical frameworks, the third generation implementation scholars call for 'testing partial theories and hypotheses' that have been repeatedly identified to correlate with comprehensive implementation in order to strengthen implementation theory, which for too long has been of explorative or descriptive nature (Winter, 2012: 265; see for literature reviews Bondarouk, 2017; Hupe and Saetren, 2015; Saetren, 2014).

Next to this multiplicity of explanatory variables, implementation research is also characterised by equifinality of explanatory variables (eg Toshkov, 2011; Treib, 2014; Winter, 2012). For this reason, we expect that several explanatory variables *together* would form a potential explanation for the variance in implementation performance. As the literature does not provide guidance on the relationship between the variables, we do not a priori hypothesise any relationship between different variables. However, the comparative process tracing in the analysis allows distilling the causal mechanism, illustrating how different variables are interrelated (see Benett and Checkel, 2014).

The political approach

The political approach is disentangled into four specific explanations: policy preferences, policy saliency, interest group pressure, and policy entrepreneurship (Kingdon, 2014; Lee and Koski, 2012; Saetren, 2014: 100; Versluis, 2007).

Policy preferences

At the municipal level, local preferences on the air quality policy, i.e. policy positions, of key players are assumed to determine policy formulation and implementation (Kingdon 2014; Henstra, 2010; May and Winter, 2009). In the Netherlands, key local players are the local council, the college of aldermen and the local policy officers, as they are responsible for implementing policies. As they all have different policy purviews they are likely to have diverging preferences when it comes to AAQ. For instance, a policy officer responsible for the mobility of public and private transit might prioritise the speed of the traffic flow over concerns on air pollution. There are many possible differences when it comes to actors' preferences. We argue that there are two types of differences in policy preferences that are important for implementation performance on AAQ.

First, AAQ policy preferences of the implementing officials tasked with implementation of environmental policies, including AAQ, might be more or less ambitious than the goals set out in the EU policy. The AAQ directive determines minimum levels of air pollution, but member states and local governments are allowed to set stricter norms. For instance, the World Health Organisation sets stricter norms than the EU policy (Bondarouk and Liefferink, 2017). Local governments are also allowed to set a stricter deadline, for example the desired level of pollution should be met earlier than the deadline prescribed in the directive. Alternatively, local governments could be less ambitious and not adhere to the deadlines or only do a bare minimum to meet the obligation of having an AAQ policy plan in place. The reason for this could be that the implementing officers give precedence to other objectives, for instance car mobility, than AAQ policy objectives. The difference in policy preferences of implementing bodies and the prescribed EU objectives is crucial for explaining non-compliance at national level (see for a vast literature overview Treib, 2014; Angelova et al., 2012). Following the same logic, the difference between what standards local governments prefer and what EU asks for may therefore influence how comprehensive implementation performance will be on the ground.

Second, implementing officials may hold diverging AAQ preferences among themselves (Henstra, 2010; Kingdon, 2014: 81; Lee and Koski, 2012; May and Winter, 2009; Robichau and Lynn, 2009; Walker and Andrews, 2013). This means that some implementing officials may be in favour of prioritising stricter AAQ policy than the EU calls for, while others may be concerned with its impact on other policies, like public and private transit policy, and advocate a more lenient AAQ policy. Before implementing any measures, the officials will then have to deliberate and reach consensus on what AAQ policy goals and measures are appropriate and acceptable to everyone. As this consensus building is likely to be difficult and time-consuming, they will be able to agree on fewer measures in the case of stark policy preference differences than in the case where differences in AAQ policy preferences are absent or easily overcome (see Andrews et al., 2012: 81). Hence, if the differences on AAQ policy preferences between key players are too pronounced, implementation performance will suffer as actors will not be able

to agree on as many policy measures. Hence policy output will be lower. Where the policy preferences are aligned but not ambitious, it is unlikely that implementation performance will benefit from it.

Therefore, we expect that higher implementation performance on AAQ policy is associated with more ambitious policy preferences than the EU policy calls for, and these policy preferences have to be approximately equally ambitious and shared among the key local players.

Policy saliency

Although policy saliency is strongly associated with policy preferences, it is 'conceptually and empirically distinct from actors' policy positions' (Thomson, 2011: 47). Policy saliency concerns the importance actors attach to a particular issue. It is possible that stakeholders attach a high level of importance to an issue on which they take a moderate position, and a low level of saliency to an issue on which they take an extreme position (Thomson et al., 2012: 613).

Given the enormous amount of national policy implementation tasks combined with limited resources, local actors pick and choose where to focus their attention (Lipsky, 1980). The level of attention and effort paid to implementation will depend on the importance local implementers attach to that specific policy (Spendzharova and Versluis, 2013; Thomann 2015; Treib, 2014). High relative importance of a policy issue positively impacts local implementers' prioritisation and will be reflected in the implementation performance. However, where policy saliency is high but implementers do not support EU policy, policy saliency is unlikely to positively impact on the implementation performance.

Therefore, we expect that higher implementation performance on AAQ policy is associated with higher levels of AAQ saliency among local implementers in case these implementers are (at least) supportive of EU AAQ policy goals.

Interest group pressure

Interest groups may target a policy issue and advocate a specific set of measures, thus creating an incentive for policy implementers to act (see Binder and Neumayer, 2005; Cheon and Urpelainen, 2013; Henstra, 2010; Kingdon, 2014; Spendzharova and Versluis, 2013; Thomson et al. 2012; Warntjen, 2012). Several EU compliance studies looking at the national level of EU policy implementation, have shown that groups whose members profit from a particular EU policy will try to influence policy implementation by means of, for instance, lobbying or public shaming (see for an overview Treib, 2014).

In the same vein one could argue that *local* interest groups would try to exert influence on the AAQ local policy. At the municipal level such locally organised advocacy represents direct ties to local constituencies (Henstra, 2010). Spendzharova and Versluis (2013: 1504) show that 'when an issue receives a lot of political and social attention, there is an extra effort to do things right' and to take policy measures that reflect stakeholders' preferences. Hence local interest groups, such as environmental organisations, health organisations or other

civil society organisations, may raise the stakes for local implementers to make an effort in implementing AAQ policy, while other interest groups would like to see a less strict AAQ policy (Lee and Koski, 2012).

The composition of interest group constellation at a local level plays an important role in determining how extensive AAQ policy will be. Local interest groups may differ in their position on how comprehensive the AAQ policy should be. Cheon and Urpeilanen (2015) point out that supporters of ambitious renewable electricity policy plans are decisive in the absence of opposition (see also Binder and Neumayer, 2005), but the positive effect diminishes with the strength of opposition. Hence if there is a balance of powers between the proponents and the opponents, implementation performance is likely to be less comprehensive when compared to a situation where supporters of AAQ policy dominate in the city. If opposition to AAQ measures is strong it is also likely to negatively impact on the AAQ policy output. In such case the AAQ policy would be quite minimal and symbolic in nature.

Therefore, we expect that higher implementation performance on AAQ policy is associated with environmental, health and civil society organisations who are predominantly supportive of EU AAQ policy goals.

Policy entrepreneurship

The final political variable, policy entrepreneurship, is not bound to individuals within the local administration and can be found anywhere (Kingdon, 2014; Meijerink and Huitema, 2010). The main characteristic of policy entrepreneurs is their willingness "to invest their resources-time, energy, reputation, and sometimes money in pushing their proposals or problems, [...] prompting important people to pay attention, coupling solutions to problems and coupling both problems and solutions to politics" (Kingdon, 2014: 122). Sabatier and Mazmanian (1980: 553) pointed to the importance of "commitment of supportive implementing officials" in affecting policy outputs by going beyond "what could reasonably be expected in using the available resources". These individuals are able to balance advocacy and brokerage strategies to achieve their goals and know exactly how to operate the administrative apparatus and mobilise group effort (Gabris et al., 2001; Meijerink and Huitema, 2010). Policy entrepreneurs are always on the lookout for new policy opportunities, are innovative and risk-taking (see Andrews et al., 2012; Meier et al., 2007; Walker et al., 2010).

Therefore, we expect that higher implementation performance on AAQ policy is positively associated with aldermen and policy officers exhibiting policy entrepreneur characteristics.

The management approach

The management approach is detailed in four specific explanations: internal coordination, external coordination, policy experience and knowledge, and personnel stability (see for overview Saetren, 2014: 100; Walker and Andrews, 2013; Bondarouk, 2017)[10].

Internal coordination

As policy implementation typically involves various government departments, effective coordination between them enhances compliance (Toshkov, 2011; Treib, 2014) and implementation performance (see Andrews et al., 2012). Effective coordination enables the organisation to shepherd actions, processes and efforts towards one common policy goal (Andrews et al., 2012) and create a shared understanding of the policy vision throughout the organisation (Jordan and Lenschow, 2000; May and Winter, 2009; Saurugger, 2012; Walker and Andrews, 2013). The systematic literature review by Bondarouk (2017) also shows that the internal coordination could produce more integrated policy approaches, which would benefit comprehensive implementation performance.

This common policy vision can be achieved with either formal or informal coordination mechanisms. An example of formal mechanisms is project groups in which staff from different departments participates. These groups "have rules or operating procedures on how often to meet, who prepares meetings, problem solving, and so on" (Schout and Jordan, 2005: 2010). Alternatively, a shared understanding of the policy direction can be achieved through frequent informal communication between departments (Schout and Jordan, 2005).

Therefore, we expect that higher implementation performance on AAQ policy is associated with frequent formal and/or informal interdepartmental coordination on this policy.

External coordination

A single municipality cannot assess all information on a given policy by itself, especially when it comes to as complicated a policy as air quality. An infrastructure for external (formal or informal) deliberation or networking facilitates high implementation performance (Betsill and Bulkeley, 2004; Jänicke, 2005; Walker and Andrews, 2013). Policy implementers may use their networks to support and enrich their policy initiatives (Mintrom and Norman, 2009). At the same time, by networking or deliberating, policy implementers may strengthen the legitimisation of their policy proposals (Meijerink and Huitema, 2010; Rousselin, 2016).

T*herefore, we expect that higher implementation performance on AAQ policy is associated with frequent formal and/or informal coordination with external stakeholders on this policy.*

10 An additional management variable to explain high implementation performance is availability of financial resources (Treib, 2014; Walker and Andrews, 2013). Yet, Dutch municipalities had equal access to financial funding for the air quality measures made available by the Dutch central government. Thus, this explanation was not taken aboard.

Policy experience and knowledge

Municipalities' human resources, i.e. their knowledge and policy experience, are also argued to contribute to comprehensive implementation performance (O'Toole and Meier, 2009, 2010; Walker and Andrews, 2013: 106). Some municipalities may employ better schooled and experienced policy officers than others. Policy officers with relevant education and years of experience can effectively boost implementation performance (Gabris et al., 2001; O'Toole and Meier, 2010; Treib, 2014).

Therefore, we expect that higher implementation performance on AAQ policy is associated with higher levels of knowledge and policy experience.

Personnel stability

Personnel stability is the final managerial variable alleged to affect implementation performance (Walker and Andrews, 2013; Meijerink and Huitema, 2010). High personnel turnover has been argued to disrupt established patterns of coordination and cooperation between different municipal organisational echelons, which can negatively affect implementation performance (Andrews et al., 2012: 80; Henstra, 2010: 244; Meier et al., 2007: 366). Changes in personnel can be harmful to implementation performance because of the loss of policy knowledge and skills and the costs of training new staff (Walker and Andrews, 2013: 115).

Therefore, we expect that higher implementation performance on AAQ policy is associated with higher levels of personnel stability.

4.3 RESEARCH DESIGN

The AAQ directive is a typical EU environmental directive containing both substantive and procedural provisions. It establishes air quality objectives, such as standards for the concentrations of specific air pollutants, and calls for the assessment, monitoring, improvement and sustainment of air quality through rigorous air quality plans. Agglomerations where air quality norms are expected to exceed are required to have a plan of action to improve air quality.

In the Netherlands, the AAQ directive has been transposed into the Environmental Protection Act (EPA), which lays the basis for the National Air Quality Cooperation Programme (NAQCP). The limit values are the same as in the EU directive. Although the directive and the transposition focus on other pollutants as well, NAQCP identified particulate matter ten and nitrogen dioxide, resulting from fossil fuel combustion processes, as the only pollutants being exceeded in the Netherlands. In urban outdoor air, the presence of both pollutants is mainly due to traffic. The Dutch national government is responsible for taxes on polluting cars and fuel, and traffic flows on national highways. The Dutch municipalities are responsible for limiting exposure to pollutants at urban level. For example, this can be achieved by setting higher

environmental standards for urban public transport vehicles through public procurement, rearranging traffic flow management, or encouragement of environment friendly ways of transportation (Bondarouk and Liefferink, 2017; Fransen, 2012; Van Oort and Van Oort, 2012; Van Rij and Brink, 2013).

The Netherlands present an interesting case for investigating whether differences in local AAQ policy implementation performance can be attributed to political or management explanations. Dutch municipalities form a very homogeneous group. First, almost all Dutch municipalities are faced with approximately the same geographical conditions that affect air quality (Busch et al., 2012; Busscher et al., 2014). Hence differences in geographical conditions among the municipalities cannot explain differences in policy output. Second, we selected medium-sized municipalities for the analysis, as they represent a large and homogeneous portion of Dutch society, making them an almost ideal sample for horizontal comparison[11]. Unlike bigger municipalities where there are harbors and airports, which tend to have a heavily negative effect on air quality, these medium-sized municipalities are also very similar when it comes to physical sources of pollution. Regional and urban traffic is the biggest source of pollution in these municipalities (Bondarouk and Liefferink, 2017; Fransen, 2012; Van Oort and Van Oort, 2012; Van Rij and Brink, 2013). Thus, they all hypothetically could take similar measures. Moreover, all municipalities had to take several measures at the same time, as it is the combination of different measures taken together that can make a difference (Fransen, 2012; Van Oort and Van Oort, 2012; Van Rij and Brink, 2013). Taken separately, each measure does not contribute that much to the improvement of AAQ. For example, next to discouraging the car-use, it makes sense to encourage and facilitate other sorts of transportation at the same time.

Third, Wood et al. (2014: 534) identified that regulatory pressure from the national government can account for differences in local implementation. Having ample discretion in deciding on AAQ measures (Bondarouk and Liefferink, 2017), Dutch municipalities have experienced equal pressure from the national government. And finally, the medium-sized municipalities had very similar municipal budgets and drew comparatively similarly from the available national funds. Dutch municipalities had equal access to the national subsidies for AAQ measures (Bondarouk and Liefferink, 2017). Hence, differences in implementation performance in our sample cannot be attributed to geographical conditions, differential national steering or financial resources.

Despite eliminating these rival explanations for the differences in implementation performance through careful case selection, we needed to control for a strong alternative explanation. If municipalities start with different levels of air pollution, i.e. the AAQ pressure, then the severity of environmental problem might explain why some municipalities took more measures than others (see also Henstra, 2010; Wood et al., 2014; Zahran et al., 2008). We

11 Dutch medium-sized municipalities have between 150 thousand and 340 thousand inhabitants.

control for this explanation by selecting municipalities from two groups: those that did and those that did not have an air pollution problem to start with. In 2008 the national government identified several municipalities that, despite *national* air quality measures, would still exceed the EU norms by 2015. Facing more persistent air pollution, these municipalities can be expected to take extra local measures next to national measures, compared to municipalities without the forecasted AAQ norms exceedance.

The measurement of implementation performance was based on the secondary database from Bondarouk and Liefferink's (2017) study on local AAQ implementation performance. They provide a ranking of medium-sized municipalities based on their AAQ implementation performance along with an extensive codebook, detailing what measures were taken over the 2005-2015 period. Hence they have mapped which municipalities were more comprehensive in their policy output than others. Bondarouk and Liefferink (2017) based their ranking on the measures that were actually taken, so not the measures that were only decided upon in the management plans but the measures that the local governments ended up implementing. They have identified six categories of all AAQ policy measures the local governments took in that period (see also Fransen, 2012; Van Oort and Van Oort, 2012; Van Rij and Brink, 2013). The six categories of air quality measures are (1) public transport, (2) prevention of cars in the city, (3) bicycle policy, (4) stimulating the demand for alternative transportation, (5) information to the public, and (6) sensitive destination measures. The measures in these categories were coded along five aspects: how comprehensive the measures were defined, the territorial and temporal scope of the measures, how broad the target group of AAQ measures was and whether there was any form of monitoring envisioned for the policy instruments. A policy measure received a higher score per aspect if more descriptions from the long-list of all possible policy practices could be 'ticked' for the city at stake. To come up with an aggregate score for one of the six categories of measures the scores on the individual measures of the same category were added up. Appendix C contains the full Bondarouk and Liefferink (2017) codebook. It also describes all AAQ measures that the medium-sized municipalities actually took.

For the selection of municipalities, we employed the most diverse distribution-based case selection on the dependent variable method (Rohlfing, 2012) as it allows for explaining the variation in implementation performance. The selection on the dependent variable is warranted as this research is Y-centered (Gerring, 2001: 137; see also George and Bennett, 2005: 218; Blatter and Haverland, 2012; Rohlfing, 2008; Rohlfing, 2012). The Y-centered research aims to analyse whether variance on the dependent variable can be associated with certain independent variables. "The starting point of the analysis is the dependent variable and within-case analysis moves backward to determine the relevant independent variables" (Rohlfing, 2008: 1505). This is different to X-centered research which tests whether and to what extent certain independent variables lead to certain levels of the dependent variable. In X-centered research, the independent variable is the starting point for the process tracing analysis (Rohlfing, 2008: 1505).

We selected four municipalities from the Bondarouk and Liefferink (2017) database based on the scores on the implementation performance. It should be noted that the least-performing municipalities are still compliant with EU directives, as they have an AAQ plan and met AAQ standards. Relative to their best-performing peers though, the least-performing municipalities took less extensive measures. The database was first divided into two groups: municipalities that did and those that did not have an air pollution problem to start with. From each group of municipalities, we selected two highest and two least-performing municipality. In this way we aimed to control for the severity of environmental problem that could potentially explain why some municipalities took more measures than others. In order to safeguard the anonymity that was promised to the respondents, the municipalities are labeled as A and B (the best performing municipalities), and C and D (the least performing). A and C have a high, B and D a low AAQ pressure.

Data on explanatory variables were gathered through document analysis and interviews with 37 respondents who were involved in AAQ policy in the period of 2005-2015. Even though the directive's transposition deadline was in 2009, we analysed data in the time frame of 2005-2015. This broader time frame allowed for sounder process tracing as we could fully capture the AAQ measures, which some municipalities had taken prior to the formal transposition. In each municipality we interviewed policy officers from environment, traffic and transit departments; aldermen with environment, traffic and transit affairs in their portfolios; consultants involved in the implementation process, local environmental groups, local Community Health Services (GGDs), local industries or companies affected by local air quality policy, and local citizens' associations. In order to obtain an overall impression of local implementation practices and trends, we also conducted interviews with a number of national actors: the Ministry of Infrastructure and the Environment, the Association of Community Health Services, the National Institute for Public Health and the Environment (RIVM), consultancies, and the national Court of Audit. A list of respondents is provided in Appendix D.

Based on these interviews the explanatory variables were coded as high, medium or low. Within the authors' team, we have thoroughly discussed the data and the coding of the explanatory variables. Due to this extensive coordination we did not perform an inter-coder reliability test. As this was a comparative case study the coding represents relative values in the case studies. As we have gathered data over ten years, we had to comprise the data in order to be able to compare it. Table 4.1 presents the operationalisation and coding scheme for the explanatory variables[12].

We used the following steps to analyse the data. First, this methodological design rests on the classic principle in logic that as long as the cases are similar in all other relevant aspects, differences in dependent variable are explained by differences in independent

12 Saliency has been operationalised in line with Warntjen's recommendations (2012:168).

variables (Denk, 2010). Thus, the codes on the explanatory variables are to co-vary with the codes on the dependent variable in order for them to be considered as potential explanations for implementation performance. Hence, we first eliminated variables in our cross-case comparison that did not co-vary with the dependent variable. As implementation research is characterised by equifinality of explanatory variables (eg Toshkov, 2011; Treib, 2014; Winter, 2012), we expected that several explanatory variables together would form a potential explanation for the variance in implementation performance. Therefore, several explanatory variables were expected to survive the elimination round.

Second, we employed process tracing of individual cases to identify the sequence and interrelation of the variables that survived the elimination round (see Bennett and Checkel, 2014). These variables served as theoretical clues to guide the process tracing of within-case analysis (Bennett and Checkel, 2014: 7). The individual within-case analyses were then compared among each other in order to reach sounder conclusions on the causal mechanisms and interactions at play.

Additionally, following the conventional method of process tracing, we also kept an eye on potential alternative explanations that could emerge from the data (see Bennett and Checkel, 2014). *Party politics* is one of the explanations that has been identified to account for EU compliance (see for an overview Treib, 2014; Thomson, 2010: 582; Mastenbroek and Kaeding, 2006). Even though this explanation is very intuitive, especially if one examines political explanations, the literature does not offer consistent findings (see for an overview Treib, 2014: 22). The partisan effect is difficult to operationalise in longitudinal studies and depends on a policy sector what effect could be hypothesised (Treib, 2014: 22). Yet, it is almost intuitively important to check for this explanation in our data.

In the next section we present the case descriptions, based on document analysis and interviews, before moving on to the analysis and the elimination rounds of variables.

Table 4.1: Operationalisation of explanatory variables

	High	Medium	Low
Policy preferences	1. Higher AAQ standards than EU standards AND 2. All key players share equally ambitious policy positions	1. Higher AAQ standards than EU standards *OR* 2. All key players share equally ambitious policy positions	1. AAQ standards are the same as EU standards *AND* 2. Key players do *not* share equally ambitious policy positions
Interest group pressure	*Many* local interest groups *systematically* pressured implementing actors on a *constant basis* in the past 10 years. If pressure came from predominantly supporters of AAQ policy it was marked as High^{+}, if opponents then High-.	Local AAQ policy opponents (marked as Medium^{-}) and/ or proponents (marked as Medium^{+}) pressured implementing actors on a *sporadic basis* in the past 10 years.	*Only a single* local AAQ policy opponent (marked as Low^{-}) or proponent (marked as Low^{+}) pressured implementing actors on a *sporadic basis* in the past 10 years.
Policy saliency	Local policy implementers, local environmental groups, consultancies, and municipal health services: - indicated that AAQ *policy enjoyed* priority at local administration in the past 10 years.	- indicated that AAQ policy enjoyed various *degrees of priority* at local administration in the past 10 years.	- did *not* indicate that AAQ policy enjoyed priority at local administration in the past 10 years.
Policy entrepreneurship	Policy officers *and* aldermen exhibited the following entrepreneurial characteristics:	Policy officers *or* aldermen exhibited the following entrepreneurial characteristics:	Policy officers *and/or* aldermen exhibited *one or two* of the entrepreneurial characteristics:
	- focused on seeking new policy opportunities, - were relatively more proactive and risk taking than other municipalities' policy actors, - invested their time, energy and reputation to improve policy implementation, - acted as connecting pins between different stakeholders, - knew how to operate the administrative apparatus to find resources for policy implementation (See Andrews et al., 2012: 81; Meier et al., 2007: 362; Meijerink and Huitema, 2010; Walker et al., 2010)		
Internal coordination	Coordination was systematic and frequent among departments in form of project groups, committees, or informal channels of communication at the level of aldermen and policy officers.	Coordination occurred on a regular basis between *two* departments at the level of aldermen *and/or* policy officers.	Coordination was very sporadic, lasted for only a few years and occurred *only* at the level of aldermen *or* policy officers.
External coordination	Regular coordination with *at least six* of the following groups:	Regular coordination with *four or five* of the following groups:	Regular coordination *with maximum three* of the following groups:
	~ ministry, regional government, other local governments, local businesses, universities or think-tanks, environmental groups, health organisations, civil society organisations (See Meier et al., 2007).		
Policy experience and knowledge	Policy officers were busy with AAQ and integration of (environmental) issues within other policy domains *for more than ten years,* and *had* relevant educational background.	Policy officers were busy with AAQ and integration of (environmental) issues within other policy domains *since 2009,* and *had* relevant educational background.	Policy officers were busy with AAQ and integration of (environmental) issues within other policy domains *only since recently, i.e. in the past 3 years,* and *had no* relevant educational background.

Personnel stability	Policy officers of the first responsible department (i.e. environment) stayed in the same department *for more than 10 years*.	Policy officers of the first responsible department (i.e. environment) were hired *since 2009*.	The policy officers of the first responsible department (i.e. environment) were hired in *the past 3 years*.

4.4 CASE DESCRIPTIONS

Municipality A

This municipality scored high on implementation performance. This means that it took most measures, which were also generally more extensive, targeted larger parts of the population, had wider territorial scope and the AAQ measures had been in place for a longer time than in other municipalities.

Air pollution enjoyed high saliency in this municipality for health reasons. A report by the Community Health Service identified air pollution as a cause for the high number of cancer patients in one of the districts. This report spurred a long institutionalised discussion between the municipal administration, local industry representatives and the civil society organisations. A platform was established which brought these different stakeholders together twice a year to discuss, i.a. health impacts of various municipal infrastructural projects. The heavy industry in the city was cooperating with the municipality's administration and was sympathetic to AAQ ambitious local policy[13]. Together they wanted to ensure that the city has a progressive environmental policy with green modes of transportation. In order to reassure the public that the municipality was doing all it could to safeguard the health of its citizens, the aldermen and policy officers from environment, and traffic and transit departments were highly committed to taking as many policy measures as possible to achieve higher air quality than the AAQ directive called for.

Additionally, many respondents characterised the aldermen and policy officers involved in AAQ policy as intrinsically and idealistically driven to improve AAQ. Both groups of actors were very knowledgeable on environmental issues. They were known for being open to new avenues of improving environment quality, even across municipal borders. They were involved in various national and inter-municipal projects. Political and administrative actors of the environmental department worked very closely with each other, as well as with the traffic and transit department's political and administrative actors. This close cooperation even resulted into the restructuring of these administrative units into a single department.

13 It is important to bear in mind that the AAQ directive does not target industry emissions. The only pollutant values that were still exceeded in the Netherlands are particulate matter ten and nitrogen dioxide in specific urban settings characterised by intensive traffic.

Municipality B

This municipality also scored high on AAQ implementation performance. This means that it took a lot of AAQ measures, which were generally more extensive, targeted larger parts of population, had wider territorial scope and the measures had been at place already for a longer time than in other municipalities.

In municipality B, similar to municipality A, AAQ was framed in terms of health. As early as 2000, a local pulmonologist raised concerns about the high number of lung patients in the municipality. Policy officers from the environmental department picked up the issue and invited a consultancy firm to calculate the health benefits of establishing an environmental zone. These calculations were crucial to sway over the alderman of environmental issues, who hereafter became a fierce proponent of the environmental zone and strongly advocated extensive AAQ measures and going beyond existing EU norms.

This alderman instructed his policy officers to ensure broad public and administrative support for the environmental zone, as this would enable adopting more extensive measures. If necessary, the alderman declared himself willing to push the issue through the council anyway. The environmental department hired a consultancy firm specialised in tackling multi-faceted issues characterised by a large number of different stakeholders with very diverging interests to coordinate the policy internally and externally. This consultancy firm managed to create broad support within the municipality apparatus and among local and regional partners, and taught the environmental policy officers how to maintain this support. Local interest groups were not visible in these discussions, with the exception of representatives of city centre shop owners, that were hampered by the environmental zone arrangements. Yet, the municipality managed to cooperate with them and ensure that they also supported ambitious AAQ policy. The local city centre shop owners were facilitated in their management of goods supply. In this way the traffic within the city was minimised. The key to getting everyone on board (including city centre shop owners) was to focus on the benefits for the citizens' well-being. In addition to this consultancy firm, a special policy officer responsible for the integration of municipal policies boosted close interdepartmental cooperation further.

Many respondents credited the environmental policy officers for their knowledge, their drive and their passion, viewing this as a cause for the municipality's high implementation performance. Municipality B was selected by the national government as an example of how to organise an environmental zone, and environmental policy officers were asked to present their experience at different national meetings.

Municipality C

This municipality scored low on implementation performance. It took fewer AAQ measures, which were also less extensive in terms of target group and territorial scope. The measures were also taken rather late, as compared to municipalities A and B.

Unlike in municipalities A and B, AAQ was seen as a transit issue and not so much related to health. Currently, though, policy officers try to link air quality to sustainability and energy issues to make it more palatable to politicians. Over the years, local environmental policy officers did their best to push through more ambitious AAQ objectives. In contrast to the policy officers, the alderman first dealing with the issue was merely motivated to reach the EU norms by 2015. In 2010 a more committed and entrepreneurial alderman was installed. She was even nominated for the Greenest Politician award of the year. Although this alderman was just as committed to AAQ policy as her environmental policy officers, together they were not able to persuade the council to adopt more ambitious AAQ measures. The council simply did not see the need or urgency of going beyond EU norms or taking a lot of measures. Only by 2014 they managed to install an environmental zone. When it comes to interest group's pressure, the local Cyclists' Union and a local environmental group sporadically pushed for more extensive policy measures over the years. The representatives of city centre shop owners, which were negatively affected by the changes in traffic circulation, did not manage to voice their concerns in the council about the change in customers' access to their shops.

The policy officers were very knowledgeable and experienced in air pollution prevention. They cooperated on a regular basis with the Community Health Service and were well connected nationally and internationally, participating in different associations and networks. The traffic and transit department cooperated informally with the environmental department. Over the years, the cooperation intensified and ebbed. When the alderman had both environment and transit in his dossier, the administrative units worked together more closely.

Municipality D

This municipality also scored low on implementation performance. It also took fewer AAQ measures, which were less extensive, targeting not as a large group of population or a territorial scope. The measures were also taken rather late as compared to municipalities A and B.

AAQ did not enjoy full political or administrative attention, as financial mismanagement and internal reorganisations dominated the agenda. The policy officer and alderman merely aimed to reach the EU norms. Just like in municipality C, AAQ was associated with transit rather than health. Only recently a local civil society organisation actively raised health concerns starting to lobby for stricter standards and more policy measures. So far this has been the only interest group concerned about AAQ in municipality D. There was no interest group opposing the AAQ measures.

The city council demanded an ex-ante evaluation of the effect on AAQ of all measures that were considered for adoption. This process stalled the actual adoption of measures. As different respondents claimed, the need to justify all AAQ measures with calculations could be seen as a pretext not to take any measures at all, as calculations are time-consuming and often do not generate conclusive recommendations. This 'policy hesitance' laid bare the lack

of a policy entrepreneur who would have taken the risk of breaking the deadlock and rejecting the demands for further calculations on basis of a too tardy process, enough data available and the inconclusiveness of these calculations.

In contrast to the other three municipalities, the internal coordination was very sporadic and only occurred when specific infrastructure projects called for cooperation between the departments. There was virtually no coordination on the political level. External coordination was limited as well, compared to the other three municipalities. The policy officers were knowledgeable and experienced in air pollution prevention.

4.5 ANALYSIS

This section presents the patterns, similarities and differences among the municipalities. Table 4.2 schematically presents the findings for all four municipalities. We first eliminate the explanatory variables that do not co-vary with the dependent variable. Table 4.2 assists in this first cross-case analysis. We then proceed with the comparative within-case analysis to go into more depth, to identify the interaction of variables and to isolate causal mechanisms. Following the conventional method of process tracing, we also reflect on potential alternative explanations (see Bennett and Checkel, 2014).

Table 4.2 shows that the political variables co-vary with the dependent variable of implementation performance more strongly than the management variables. Contrary to scores on the political variables, all municipalities scored very similarly on *external coordination, policy knowledge and experience,* and *personnel stability*. This lack of variation means that these management variables cannot explain the differences in implementation performance. Yet, it is important to note that as all municipalities formally complied with an obligation to have a plan, these variables may account for the fact that these municipalities complied with this procedural provision in the first place. Though interesting in itself, this finding is nevertheless of secondary importance in this study as we are interested in differences in implementation performance.

Zooming in on the political variables in Table 4.2, two observations stand out. First, Table 4.2 shows that *interest group pressure* does not co-vary with the high scores on the implementation performance. Thus, it does not constitute a necessary condition for high implementation performance. Interestingly though the scores on interest group pressure seem to correlate with the level of AAQ pressure. This suggests that interest group pressure intensifies with the level of environmental problem pressure. What the empirics also showed is that there was almost no opposition from interest groups against AAQ measures. In municipality B, there was one interest group of city-centre shop owners that voiced its concerns about the reachability of their shops if the municipality were to ban vehicles from

Table 4.2: Schematic representation of the findings in four municipalities

	A	B	C	D
Dependent variable				
AAQ implementation performance	High	High	Low	Low
Control variable				
AAQ pressure	High	Low	High	Low
Political approach				
Policy preferences	High	High	Medium	Low
Policy saliency	High	High	Low	Low
Interest group pressure$^{+/-}$	High^{+}	Low^{-}	Medium^{+}	Low^{+}
Policy entrepreneurship	High	High	Medium	Low
Management approach				
Internal coordination	High	High	Medium	Low
External coordination	High	High	High	Medium
Policy experience and knowledge	High	High	High	High
Personnel stability	High	High	High	High

Note: '+' signifies pro-strict AAQ measures interest group pressure, '-' signifies anti-strict AAQ measures interest group pressure.

the city centre with the new environmental zone (Respondents: 17-19, 21). Yet, very quickly the policy officers managed to convince them that this would not be a problem (Respondents: 17-19, 21). Hence the city-centre shop owners were swayed over to support the environmental zone. In other cities, there was no opposition of any significance at all. While more research is required to explain this phenomenon, a possible explanation emerged from the interviews. The car and transport industry that is affected by traffic-reducing AAQ measures operates in the Netherlands on a national level (Respondents: 1 and 4). Hence, they would try to represent their interest on a national rather than a local level.

A second observation based on Table 4.2 is that *policy saliency* seems to co-vary perfectly with the dependent variable. The difference in saliency can be linked to the type of framing of AAQ. In municipalities A and B, AAQ policy was framed as a health issue (Respondents: 5, 11, 13-23), while C and D framed it as a transit issue (Respondents: 24-26, 32, 33, 35, 37). This could explain the high saliency of AAQ policy in A and B, as generally health issues are considered to be more urgent in local politics than transit issues.

In addition to policy saliency, *policy preferences* and *policy entrepreneurship* co-vary to some extent with implementation performance (Table 4.2). Comparative process tracing suggests that high saliency alone is not enough to result into high implementation performance. In case B the AAQ issue was salient to the policy officers, but in the beginning

of the process political actors were not yet as ambitious as policy officers (Respondents: 5, 17-19, 22, 23). Highly entrepreneurial and committed policy officers were crucial in convincing the political actors of the necessity of extensive measures (Respondents: 5, 17-19, 21-24). Case C illustrates that low saliency (Respondents: 24, 27, 29, 30) provided room for differences in policy preferences among political actors (Respondents: 24, 27, 30). As AAQ was not considered urgent by the city council, the ambitious preferences of entrepreneurial policy officers were not sufficient to convince the alderman first dealing with the issue and the city council, of the necessity of extensive AAQ policy (Respondents: 24-28, 30, 31). Only in 2010 with the new alderman, who was more entrepreneurial and committed to the AAQ policy, were the policy officers able to successfully advocate for more extensive measures. However, still the city council did not favour extensive measures, and thus municipality C could take fewer measures than municipalities A and B. In Case A, AAQ enjoyed high saliency among policy officers and political actors. The ambitious policy preferences were necessary to signal their commitment to the far-reaching AAQ policy to the public (Respondents: 5-16). As political and administrative actors were highly entrepreneurial, this exacerbated their policy efforts (Respondents: 5-16). In case D, finally, there was no policy saliency to begin with (Respondents: 32-36). This coincided with less entrepreneurial policy officers and political actors (Respondents: 32-35, 37). The city council was highly critical of policy ambitions of the alderman and the policy officers, requesting detailed cost-benefit calculations of all AAQ policy measures (Respondents: 32-35). This resulted in a protracted process of approving budgets for the policy (Respondents: 5, 32, 33, 35). In sum, policy saliency, preferences and entrepreneurial activity of political actors and policy officers, if ambitiously aligned, can reinforce each other, resulting in higher implementation performance.

Next to these differences on political variables, there is one notable difference in how *internal coordination*, i.e. the management variable, was organised in the best and the least performing municipalities (Table 4.2). Municipalities A and B exhibited extensive coordination within the administration and with the political apparatus. Especially municipality B put a lot of effort into establishing effective forms of internal policy coordination (Respondents: 17-22). Even so, this explanatory factor seems to co-vary less consistently with implementation performance than the *policy saliency* variable (see Table 4.2). Whereas it clearly facilitated the communication and exchange of ideas between the administrative stakeholders, which enabled more measures to be taken (Respondents: 16-22, 24, 25, 27, 35), it does not seem to be a sufficient condition on its own and needs to coincide with other explanatory variables like policy saliency, preferences and entrepreneurship to be able to positively impact implementation performance.

Finally, concerning potential alternative explanations, our empirical data over 10 years gives rise to an interesting observation regarding the impact of political party affiliation of aldermen and electoral change (Table 4.3). Electoral change seemed to matter in municipality C (Respondents: 24, 26, 27). A more committed, entrepreneurial alderman from the liberal

party replaced a less committed one from the Christian-democrat party (Respondents: 24, 26, 27). Even though, the Dutch liberal party is known for favouring car-friendly policies, this liberal alderman was in favour of far reaching traffic-limiting measures. Thus, more AAQ measures could be taken.

Table 4.3: Alternative explanations

	A	B	C	D
Dependent variable				
AAQ implementation performance	High	High	Low	Low
Control variable				
AAQ pressure	High	Low	High	Low
Political party affiliation of alderman				
First period	Left green*	Local party*	Christian-democrats	Left green
Second period	Left green*	Labour*	Liberal*	Liberal democrats

*Note: * = ambitious AAQ policy preferences*

At the same time, a change of aldermen did not seem to make a difference for the implementation performance in municipality B, where a labour alderman succeeded a local party alderman (Respondents: 17, 18, 20, 21). Here one could not expect a labour alderman to continue with an ambitious green policy of local party predecessor. Nevertheless, both were equally ambitious. Neither was implementation performance affected by an electoral change in municipality D. Here, a liberal-democrat alderman took over from a left green alderman (Respondents: 35, 36, 37). One could have expected that liberal democrat would have to deal with green legacy of his predecessor, but the policy preferences of both aldermen were similar and equally unambitious. Municipality A had the same left green alderman during the entire period of investigation. Thus, political party affiliation of aldermen and change of aldermen on its own cannot explain the differences in implementation performance in our sample.

4.6 CONCLUSION

We examined to what extent differences in local implementation performance can be attributed to the political and managerial variables derived from EU compliance and implementation research. Our analysis shows that differences in local implementation performance are better explained by the political approach than by the management

approach. Hence the national politicisation of EU policies continues at local level as well. This finding illustrates the necessity to look beyond national level to see how EU plays out on the ground. As EU often sets minimum targets or employs procedural policy instruments, we need to examine why some implementers do more than others to understand how do member states make EU policies work.

By conducting a theory-driven comparative within-case analysis, we complemented earlier research on policy saliency showing how saliency may interact with other variables. High policy saliency emerged as the driving force, which in combination with ambitious policy preferences and entrepreneurship of both policy officers and political actors determined high implementation performance. In addition to this, frequent internal coordination contributed to high implementation performance, by enabling and strengthening the preference alignment of policy officers and political actors.

While political variables explain the differences between municipalities in the Netherlands, the management variables might be conducive to another outcome. All municipalities comply with the procedural obligation to have an AAQ management plan in the first place. Hence while similar scores on management variables cannot explain the *differences between* municipalities, they could explain the same outcome on compliance. Thus, politicisation explains the differences in implementation performance, but management variables could explain the compliance record in our cases. Whether the latter is indeed the case, should be subjected to rigorous comparative research.

When it comes to the representativeness of our findings, we may reasonably expect that differences in environmental policy implementation performance in medium-sized municipalities of (at least) North-western EU member states will exhibit the same causal mechanism. These member states are characterised by relatively similar environmental awareness and economic development. At the same time, we expect that the observed causal mechanism, driven by policy saliency, will also be at play during implementation of other policies. However, whether this is the case should be examined in future research.

This analysis identified two peculiarities, which call for further research on EU implementation. First, the framing of environmental issues as health issues was found to have played an important role in the implementation of the AAQ directive as it resulted into higher policy saliency when compared to cases where AAQ was framed as a transit issue. How the framing dynamic exactly impacts saliency and in turn policy implementation should be examined in more depth. Second, despite the observed politicisation of EU implementation at the local level, our analysis sketched a limited effect of local council elections on the implementation performance. Aldermen behaved differently from what one may have expected relying on their political party affiliation. More in-depth research is needed to understand how local political parties' interests affect EU implementation.

5.

Making EU policies work at the local government level: a systematic literature review and research agenda

This chapter is under review in an international peer reviewed journal.

ABSTRACT

EU compliance scholars have persistently called for looking beyond transposition, as 'the law in books' does not typically have to match 'the law in practice'. At the same time, a separate stream of research on EU local implementation has produced a vast body of knowledge on EU practical implementation. These EU local implementation studies are scattered across many different policy-specific journals, and are characterised by descriptive research designs, making it difficult to draw theoretical lessons from each individual study. Surprisingly, these two streams of literature do not interact. As a result, knowledge accumulation is restricted. This article takes stock of EU local implementation research by conducting a systematic literature review of the field. A thorough analysis of 85 studies reveals evidence on local non-compliance with EU policies, national and policy patterns of non-compliance, and provides a synthesis of explanations for policy implementation. Following, a seven-point research agenda is proposed.

5.1 INTRODUCTION

European Union (EU) governance is characterised by coexistence and interaction of different tiers of government: supranational, national, and sub-national (regional and local authorities). Taken together, this 'coexistence' and 'interaction' form the essence of what has been called 'multilevel governance' (Hooghe and Marks, 2001; Panara and Vairney, 2013). According to this idea, the different levels of government work together to overcome challenges the EU faces today: refugee crises, social and economic inequalities, and environmental and climate change challenges. There are many EU policies that address these different challenges. As the EU has little implementation capacity of its own, it relies on the member states and their constitutive levels of government to ensure that these policies are put into practice.

The success of this multi-level endeavor lies in the implementation of EU policies (Hill and Hupe, 2014; Thomann 2015). It matters little if the EU has an ambitious policy agenda if the bodies charged with its implementation lack the ability or the willingness to do so (cf Smith and Larimer, 2009: 157). Therefore, EU compliance research has examined to what extent 'member states make EU policies work' (Haverland and Romeijn, 2007). It produced a fair amount of knowledge on EU directives' transposition into domestic law (for literature reviews see Angelova et al., 2012; Mastenbroek, 2005; Toshkov, 2011; Treib, 2014). However, as Thomann and Sager (2017:1255) put it, "while undoubtedly relevant, several insights suggest that research on legal compliance gives us an incomplete picture of EU implementation". Reviewing EU compliance research, Treib (2014: 29) argued that 'we have as yet comparatively little evidence on the extent to which there is non-compliance beyond transposition and on the factors that are conducive to effective application and enforcement'. If we accept the notion that multi-level governance can only effectively tackle any policy challenge as long as lower levels of government commit to supranational policy goals (Hill and Hupe 2014; Thomann and Sager, 2017), this leaves us with unsatisfactory knowledge about to what extent 'member states make EU policies work' (Haverland and Romeijn, 2007).

Local governments hold a unique position in the EU's multi-level implementation structure. While tasked with EU policy implementation, local governments have limited opportunities to directly shape EU policies in Brussels (Goldsmith, 2005: 240; Ladrech, 2010; Panara, 2015; Van Bever et al., 2011:19). Consequently, they find themselves subject to directions from a somewhat remote level of government (Goldsmith, 2005: 240), while being held democratically accountable to local constituencies, whose local preferences do not always align with EU objectives (Bondarouk et al., 2019). Additionally, in contrast to policy specific implementing agencies (eg Versluis, 2007; Versluis and Tarr, 2013), local governments have to coherently implement a great variety of policies at the same time. In a recent public consultation organised by the EU Commission (2015), subnational governments indicated that while EU objectives on paper are often complementary, in practice many EU level initiatives are mutually incompatible and fragmented. As there is no EU guidance on how to deal with

these policy incompatibilities, local governments are presented with a challenge. They have to decide which policies take precedence while keeping an eye on possible infringement proceedings if one of the policies is not implemented correctly.

Despite local governments' importance for EU compliance, the practical implementation stage where local bodies and other agencies carry out the transposed EU directives has not received much systematic academic attention (Angelova et al., 2012; Thomann and Sager, 2017; Treib, 2014). Recent literature reviews of EU compliance research (Angelova et al., 2012; Treib, 2014) identified only a few studies dealing with practical implementation. These few studies found that 'the law in books' does not necessarily match 'the law in practice' (Dimitrova and Steunenberg, 2013; Falkner and Treib, 2008; Versluis 2007; Versluis and Tarr, 2013). Accordingly, EU compliance scholars have persistently called for more research into the practical implementation of EU legislation (see Thomann and Sager, 2017; Treib, 2014).

Surprisingly, this call contrasts sharply with the existence of an abundance of policy-specific studies describing the practices of implementing EU policies at the local level (cf Bondarouk and Mastenbroek, 2018; Dossi, 2012; Loefgren, 2015). These local studies have not reached the EU compliance scholarly community (Loefgren, 2015: 159), mostly because they are scattered across various policy-specific journals (Treib, 2014). Furthermore, most of these studies are descriptive and idiosyncratic, which precludes the development of a comprehensive understanding of how local actors make EU policies work (Dossi, 2012; Treib, 2014: 19)[14]. Hence, despite the overwhelming amount of research into the local implementation of EU directives, there seems to be little knowledge accumulation, which is necessary for advancing the research field (Dossi, 2012; Loefgren, 2015).

Therefore, in order to contribute to our understanding of how EU multi-level implementation structures work, this article offers a synthesis of the existing but scattered knowledge on EU local implementation, following the guidelines for systematic literature reviews (e.g. Booth et al., 2012, Denyer and Tranfield, 2006; Petticrew and Roberts, 2006). This article reviews 85 empirical studies on EU local implementation. In doing so, the objective of this article is three-fold. First of all, it takes stock of academic knowledge on five descriptive aspects of EU local implementation: the extent of local (non-)compliance with EU policies (1), the research methods employed (2), the member states covered (3), the policy fields (4) and the policy obligations (5) examined in EU local implementation research. Second, this article analyses how the explanations for EU local implementation, presented in these studies, relate to the explanations put forward in the few studies on practical implementation known to EU compliance researchers so far (Angelova et al., 2012; Treib, 2014). This theoretical juxtaposition of two streams of literature enables further knowledge accumulation. On this basis, thirdly, this article proposes a seven-point research agenda for EU local implementation research.

14 The same criticism is also applicable to general implementation research (Hill and Hupe, 2014: 202; Hupe, 2014: 167; O'Toole, 2017: 377; Saetren, 2005; Smith and Larimer, 2009: 16).

The next section first surveys the key six explanations for practical implementation of EU directives that have been identified in existing literature reviews of EU compliance research (Angelova et al., 2012; Treib, 2014). These explanations form the theoretical starting point for analysing EU local implementation studies. Next, the method and scope of this systematic literature review is discussed. The next section presents the descriptive and theoretical results of the review. The final section concludes on the state of the art and proposes a research agenda on EU local implementation.

5.2 THEORETICAL GUIDANCE FROM EU COMPLIANCE RESEARCH

In order to bridge EU local implementation research and EU compliance research, this section presents the key explanations for practical implementation of EU policies presented in the literature reviews on EU compliance (Angelova et al., 2012; Treib, 2014). While acknowledging the potential relevance of national implementation research, this article turns to *EU compliance* research for theoretical guidance for two reasons.

First of all, comparing to what extent the same explanations have been considered and whether other explanations for EU implementation have emerged in EU local implementation research, allows us to examine how these two related fields of research build on each other. Hence, it facilitates knowledge accumulation on EU practical implementation. And second, while EU implementation is comparable to national implementation processes, it suffers from 'additional layers of complexity' (Dörrenbächer, 2018; Sampson Thierry, 2019: 24-25; Treib, 2014:29). Sampson Thierry (2019: 24-25) argues that the practical implementation of EU policies entails a larger challenge to implementing actors. EU policies are defined at distant EU level and 'may not enjoy political support in the Member State nor have they been subject to similar political debate in national parliament' (Sampson Thierry, 2019: 24). Hence, local actors are less likely to exhibit political ownership of EU policies compared to national policies. Therefore, EU implementation is argued to pose more challenges for the local implementers compared to national policy implementation.

In his review on EU compliance research, Treib (2014) mentioned only a few studies on EU practical implementation and listed six explanatory variables for EU compliance at the practical level. Angelova et al. (2012) considered eleven studies on EU practical implementation in their meta-analysis of EU compliance studies. While none of the identified studies dealt with local government implementation, these findings on the practical implementation of EU policies seem relevant for local government implementation.

First of all, both reviews mentioned the importance of *administrative capacity* and *monitoring* for effective implementation of EU policies (Treib, 2014: 30; Angelova et al., 2012: 1276). Administrative capacity is then defined in terms of sufficient resources or expertise on the part of the implementers. The shortcomings in these parameters have been shown

to explain the extent of implementation. This explanation corresponds with key insights from top-down implementation research (e.g. Pressman and Wildavsky, 1984; Bardach 1977; Sabatier and Mazmanian 1980).

Third explanation, *coordination between implementers* seems to positively affect the ease with which EU legislation is implemented on the ground (Treib, 2014: 30; Angelova et al., 2012: 1276). Such coordination can be vertical, i.e. between the hierarchical levels of government, and horizontal, i.e. between the peer levels of government and stakeholders. This 'interorganisational coordination' explanation is also put forward in national implementation research (e.g. O'Toole and Montjoy, 1984; Winter, 2012: 259). Intensive coordination can stimulate agreement on basic understandings of the policy, increase commitment and build a common interest, which would benefit implementation (Winter, 2012: 260).

Fourth, Treib (2014: 30) highlighted research done by Versluis (2003, 2007) on the monitoring of compliance with chemical safety rules. She identified the policy or issue *salience* as a crucial indicator for the extent to which an EU policy is implemented. In national implementation research Lipsky (1980) argued in a similar way that given the amount of implementation tasks combined with limited resources, actors responsible for implementation pick and choose where to focus their attention. Hence, they are likely to prioritise some policy issues over others. The issues that are more prominent to the actors will be picked up earlier (see also Kingdon, 2014). Therefore, the level of effort paid to implementation will depend on the importance local implementers attach to an issue.

Fifth, the degree of *policy and institutional fit* between a piece of EU legislation and existing domestic practices has been argued to influence the extent of implementation (Treib, 2014: 30; Angelova et al., 2012: 1276). This explanation corresponds with Sabatier and Mazmanian (1980) argument that policies requiring a vast change of behaviour on the part of implementers are harder to implement in practice than policies that only require gradual changes of behaviour (see also Van Meter and Van Horn, 1975: 458).

Finally, based on the research by Dimitrova and Steunenberg (2013) on the implementation of EU rules on movable cultural heritage in Bulgaria, Treib (2014: 30) and Angelova et al. (2012: 1274) argued that EU practical implementation depends on the *preference alignment* between key actors in the implementation. Local actors are likely to differ in their policy preferences among themselves (Bondarouk et al., 2019). Before implementing any measures, these actors will have to deliberate and build consensus on what policy goals and measures are acceptable to everyone. As this consensus building is likely to be time-consuming, they will be able to agree on fewer measures in the case of stark policy preference differences than in the case where policy preferences are aligned. This explanation is also in line with national implementation research (cf Andrews et al., 2012: 81; May and Winter, 2009; Van Meter and Van Horn, 1975: 458-459; Walker and Andrews, 2013; Winter, 2012:259-261).

Our theoretical analysis of EU local implementation studies examines to what extent these six explanations have been considered and whether other explanations have been suggested.

5.3 REVIEW METHOD AND SCOPE

A systematic literature review is an explicit and reproducible method for identifying, evaluating, and synthesising an existing body of research on a particular topic (Booth et al., 2012). The systematic and transparent nature of identifying relevant publications, distilling data from eligible studies and synthesising the findings distinguishes systematic literature review from a general literature review (Booth et al., 2012; Denyer and Tranfield, 2006; Petticrew and Roberts, 2006). It also communicates the strength of the available evidence, thereby indicating how much confidence policy makers and researchers should have in certain phenomena (Booth et al., 2016: 11). For this reason, systematic reviews have increasingly gained popularity for public administration research (e.g. De Vries et al., 2016; Tummers et al., 2015).

In order to identify as many relevant studies as possible, the search terms were selected carefully. First of all, a list of synonyms for 'local government' was established. We included the following synonyms for local government in our search: "local government" OR municipal* OR urban OR subnational OR "local level" OR "local policy" OR "urban policy". Second, the search keywords had to contain an 'EU' element in order to distil studies of *EU* policy implementation. Therefore, the keywords "EU" OR "European" were added to the search keywords. Third, next to key concepts of "multilevel governance" OR "multi-level governance" OR implementation OR compliance, 'Europeani$ation'[15] was added to the list. These considerations resulted in the string of keywords that was used to perform a Boolean search. Web of Science (Thomson), one of the largest scientific databases for the social research was used to collect data. The initial search at Web of Science yielded 1010 documents with these keywords in either the title and/or the abstract and/or the keywords of a publication.

The relevant studies were further selected in three steps in March 2017. First, the analysis was limited to journal articles, because these enjoy peer review and therefore the quality of research is safeguarded. Second, the sample was restricted to articles written in English. This selection resulted in 934 articles. Third, the articles were excluded if they covered engineering, mathematics, chemistry or any other natural science fields. This was done in order to ensure that the articles really dealt with the implementation of EU policies at the local government level. This selection yielded 562 articles. In the final selection step, the abstracts were read closely. Articles were excluded if they focused on regions, or normative discussions which

15 'Europeanisation' refers to the adaptation of member states to European integration (Bulmer, 2007; Dossi, 2012; Treib, 2014). As the implementation of EU legislation usually entails certain policy or institutional adaptations, the studies dealing with Europeanisation at local level were considered for the selection as well.

EU policy objectives and instruments would have been better, or which lobbying strategies were used in Brussels. This led to the final identification of relevant 85 articles. To validate this sample, it was checked for inclusion of a number of well-cited articles on local governments (eg. Blom-Hansen, 2005; Goldsmith, 1993; Marshall, 2005), and whether the articles on local government identified in Bondarouk and Mastenbroek's (2018) literature review on practical EU environmental policy implementation were also included. This was indeed the case.

For the descriptive analysis, as outlined previously, the studies were examined on five aspects: (1) the extent of local (non-)compliance with EU policies as evidenced in these studies, (2) the research methods employed, (3) the member states covered, (4) the policy fields and (5) the policy obligations examined in EU local implementation research. While it is common to review literature on the research methods, countries and policy field covered in the sample (see Saetren, 2005, 2014), additional attention was paid to evidence of (non-) compliance with EU policies and policy obligations for the following two reasons.

First, Treib (2014: 29) argued that "we have comparatively little evidence on the extent to which there is non-compliance beyond transposition". Hence, the studies were examined to what extent there is evidence of non-compliance at EU local implementation, i.e. to what extent there is evidence of local governments failing to implement a certain EU policy obligation. Second, Bondarouk and Mastenbroek (2018) demonstrated the need to identify the specific 'policy obligations' studied in EU implementation research. While EU transposition research has focused primarily on substantive provisions, research on practical implementation of EU environmental policy has also paid attention to procedural provisions (Bondarouk and Mastenbroek, 2018). In contrast to substantive obligations, which are used to directly affect the production, distribution and consumption of goods and services through norms and standards, procedural obligations are designed to indirectly affect the desired policy outcome through the manipulation of policy processes (Howlett, 2000, 2011; Howlett et al., 2009). Hence, as these are two different policy instruments, the implementation of it is likely to differ as well. Thus, it is important to review our knowledge on EU local implementation on both types of obligations.

For the theoretical analysis, we examined whether the articles contained any of the six explanations suggested earlier: 'administrative capacity', 'monitoring', 'coordination between implementers', 'salience', 'policy and institutional fit', and 'preferences alignment'. As we do not have the confidence that this list is exhaustive, we examined whether any other explanations emerged from the literature.

In order to analyse the evidence for the theoretical explanations derived in EU local implementation research, we proceeded as follows. If diverse studies – in terms of methods, country, policy fields and obligations- all point to the same explanations, the stronger the evidence that these explanations travel across policy sectors, country contexts and methodological techniques (Baumeister and Leary, 1997; Booth et al., 2012; Denyer and Tranfield, 2006). These explanations can be deemed more promising in explaining EU local

implementation. At the same time, if certain explanations are observed in a limited variety of research designs, further examination is warranted (Baumeister and Leary, 1997: 315; Denyer and Tranfield, 2006). If several studies failed to support a given hypothesis, then the probability is higher that the hypothesis is incorrect (Baumeister and Leary, 1997: 315).

5.4 DESCRIPTIVE ANALYSIS

Figure 5.1 illustrates the growing interest in EU implementation by local governments. At the same the sample also shows that this interest is quite dispersed as 85 studies are published in 54 different journals. Environmental journals *(eg. Environmental Science & Policy, Land Use Policy, Environment and Planning C, Journal of Environmental Planning and Management)* take the lead, having published 67 per cent of all studies. Public administration and political science journals *(eg. Journal of European Public Policy, European Urban and Regional Studies, Journal of European Integration, Journal of Common Market Studies)* published only 19 per cent of all studies. This relatively low level of publication is remarkable when considering the persistent call for more research into practical implementation of EU policies (Treib, 2014; Versluis, 2007).

Evidence of non-compliance

The selected studies documented relatively low levels of local non-compliance. 26 per cent of all studies found evidence of non-compliance. Yet, this evidence should be interpreted with caution. While EU compliance research seeks to explain compliance versus non-compliance (see also Bondarouk and Mastenbroek, 2018; Thomann and Sager, 2017; Zhelyazkova, 2013), many of these studies approached implementation from another angle: local variation in EU implementation practices. The majority of studies were interested in documenting best practices or explaining differences among *compliant* cases. Examples of the research questions are how a certain policy was implemented, how differences in implementation approaches could be explained, and how EU policy changed local policies. Consequently, the evidence of non-compliance does not necessarily reflect empirical reality, but is affected by prominent research questions in the field. More research into local implementation of EU policies is therefore required before jumping to conclusions on the level of non-compliance at the local level.

While examining to what extent local governments implement EU policies, none of the studies examined the congruence between local implementation and national transposition of those policies. Hence, the multi-level character of EU policy implementation is somehow lost in these studies. Thus, there is no systematic knowledge on the relationship or interaction between national and local EU implementation.

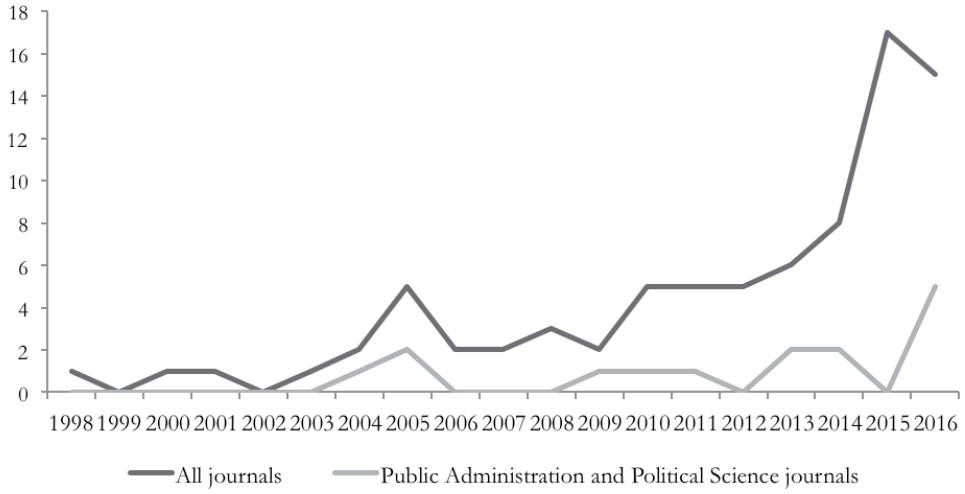

Figure 5.1: Number of publications on EU local implementation per year

Member states

Turning to the member states examined in local implementation of EU policies, the sample shows 21 different countries. Italy, France, Germany, Greece, Poland, the Netherlands, Spain, Sweden and the United Kingdom received the most attention in these studies. The following seven countries did not feature in the sample: Croatia, Cyprus, Estonia, Hungary, Latvia, Malta and Slovenia. Nevertheless, the variety of examined countries is greater than in EU compliance research (for an overview see Angelova et al., 2012: 1281). Thus, our knowledge of local implementation of EU policies seems to cover the variety of member states relatively well.

When examining whether some countries exhibited evidence of non-compliance more often than others, our sample shows some proof for the 'worlds of compliance' argument by Falkner and Treib (2008), although their argument was refuted multiple times in the last decade (Treib, 2014). They argued that practical implementation of EU directives will run smoother in the countries of the 'world of law observance' and the 'world of domestic politics' than in countries of the 'world of dead letters' and the 'world of transposition neglect'. Thus, more non-compliance is to be expected in the latter two worlds. Table 5.1 shows how many studies examined local governments in countries belonging to different worlds of compliance, and the percentage of studies that found non-compliance evidence. The sample shows that studies looking at the 'worlds' where practical implementation is hypothesised to be problematic found indeed more evidence of non-compliance (37 per cent) compared with evidence for non-compliance in the 'worlds', where practical implementation is hypothesised to be smoother (24 per cent). Yet, our systematic review also shows that the notion of non-compliance at the local level is not exclusively reserved for the countries of the world of 'dead letters' and 'transposition neglect'.

Table 5.1: Worlds of compliance in the sample

Worlds of compliance	Number of studies	Non-compliance %
World of law observance, World of domestic politics	33	24 %
World of dead letters, World of transposition neglect	30	37 %
Countries not in the typology	22	14 %
Total	85	26 %

Table 5.2: Policy fields in the sample

Policy field in the sample	Number of studies
Water policy	17
Air quality policy	15
Climate adaptation policy	9
Biodiversity policy	7
Obligations stemming from the funds	6
Energy policy	5
Multiple directives	5
Waste policy	4
Land use policy	4
Urban policy	4
Employment policy	3
Transportation policy	2
Cohesion policy	2
Strategic Environmental Assessment	1
Subsidiarity principle	1
Total	85

Policy fields

The analysis of policy fields examined in EU local implementation research reveals a great diversity (see Table 5.2). A lot of attention has been paid to environmental policy (67 per cent). This focus on environmental policy is similar to that of EU compliance research (Angelova et al., 2012). A potential explanation for this focus relates to the competences that most EU municipalities enjoy in the field of environmental policy (CEMR, 2016). At the same time, other competences are also quite common among EU local governments. A lot of municipalities are tasked with the provision of social security and employment, are responsible for public procurement, subsidies and state aids in their jurisdictions (CEMR, 2016; Kaiser, 2005). Yet, these fields have received much less attention.

Policy obligations

Table 5.3 illustrates which policy obligations have been examined and how many articles evidenced non-compliance with these specific obligations. Hence it shows which policy obligations are particularly difficult to comply with. Table 5.3 reveals that 73 per cent of the studies paid attention to procedural policy obligations. This interest in procedural obligations is noteworthy, considering that EU compliance research has paid relatively less attention to them (cf Bondarouk and Mastenbroek, 2018). Table 5.3 summarises six types of different procedural obligations in the sample. Most attention (60 per cent) was paid to an obligation to develop an *action plan*, while other types of procedural obligations received less attention. While all other procedural obligations deserve better scholarly scrutiny, two obligations stand out in particular due to their empirical and theoretical relevance: local policy integration and stakeholder participation.

Table 5.3: Policy obligations in the sample

Policy obligation	Number of studies	Non-compliance %
Substantive obligations		
Norms and standards	23	44 %
Procedural obligations		
List of measures or action plans	37	14 %
Participation of stakeholders	17	24 %
Integration of policies	3	67 %
Organisational adaptation	2	-
Monitoring	2	-
Information provision to the citizens	1	100 %
Total	85	26 %

First, only three studies analysed how different EU policies are integrated at the local level. EU directives often contain clauses with reference to other directives, obliging the implementers to coordinate the implementation in accordance with other legislation. For example, local governments may wish to provide some assistance to companies, which wish to make their business more sustainable. While such assistance will be in line with the EU sustainability agenda, local governments also have to ensure compliance with EU state aid and public procurement rules. A recent public consultation by the European Commission (2015) identified the coherence and integration of EU policies at the local level as one of the most pressing challenges of EU implementation. Hence, there is an empirical need to examine policy integration in more detail. It will shed light on whether and how the complex intertwined nature of EU policies' design is reflected in local implementation. This knowledge will generate a deeper understanding of how multi-sector and multi-level governance works in reality.

Second, 14 studies examined the participation of stakeholders at the local level. EU legislation often contains this procedural obligation (Knill and Lenschow, 2004; Newig and Koontz, 2014), the main aim of which is to increase the legitimacy of EU policies and ultimately EU compliance (Loefgren, 2015; Newig and Koontz, 2014; Koutalakis, 2008; Rottman and Lenschow, 2008). The sample shows that 29 per cent of studies on stakeholder participation demonstrated that local government do not live up to EU obligations to consult stakeholders. Considering the vested hope in this policy instrument to remedy EU legitimacy and improve EU compliance (Loefgren, 2015; Newig and Koontz, 2014), its regulatory effectiveness still needs to be examined in more detail.

Methods

Table 5.4 illustrates which research methods were employed in EU local implementation studies. The sample shows that 72 per cent of all studies employed a qualitative design, 23 per cent a quantitative design, and 5 per cent a mixed design. Table 5.4 specifies further the different methods used. 69 per cent of all studies employed a form of a case study research design. 38 per cent of all studies employed a comparative case study design. This is slightly surprising as the expectation was that a majority of EU local implementation studies would be idiosyncratic, i.e. based on a single case design (Dossi, 2012; Loefgren, 2015). The systematic literature review shows that 'only' 22 per cent of all studies had such an N=1 character. Remarkably, most of the case study research does not explain case selection or external validity, instead deriving it from a case's empirical significance. This impedes the generalisation of the findings of such research designs (see also Hill and Hupe, 2014: 202; Hupe, 2014: 167; Saetren, 2005; Smith and Larimer, 2009: 16). Moreover, it is worrisome with an eye on knowledge accumulation and strengthening implementation theory (Saetren, 2014).

Table 5.4: Research methods in the sample

Research methods	Frequency %
Comparative case studies	38 %
Single case study	22 %
Dataset	18 %
Longitudinal comparative case studies	7 %
Survey	6 %
Mixed	5 %
Longitudinal single case study	2 %
Action research	1 %
Qualitative Comparative Analysis	1 %
Total	85 (100%)

5.5 THEORETICAL ANALYSIS

This section presents a theoretical analysis of the local implementation studies found. Compared to the comprehensive theoretical testing research designs in EU transposition studies (Angelova et al. 2012, Mastenbroek, 2005; Toshkov, 2011; Treib, 2014), EU local government implementation studies use fewer theory-testing research designs. EU local implementation studies typically describe *how* EU policy was implemented, and then elaborate inductively on possible explanations.

As shown in Table 5.5, nine different explanations emerge from the systematic literature review, six of which have been already proposed in EU practical implementation studies of EU compliance research. The explanations differ in the frequency of consideration and the availability of evidence.

Table 5.5 lists the explanations and denotes the nature of relation between the independent variables and the dependent variable, i.e. a specific explanation and the level of policy implementation. Additionally, per explanation the table also shows the number of different research methods (see Table 5.4 for an overview), the number of different policy fields (see Table 5.2 for an overview), the number of different policy obligations (see Table 5.3 for an overview) and the number of different national contexts that provided evidence for the same explanation. The higher the numbers the safer it is to assume that a certain explanation has consistently been evidenced in studies employing different research methods, and that the explanation holds across member states and policy sectors (Baumeister and Leary, 1997; Booth et al., 2012; Denyer and Tranfield, 2006). Table 5.5 presents explanations from most to least frequently evidenced in local implementation studies.

The remainder of the section presents the explanations according to the extent of support they received across different studies. First, three types of explanations that are consistent across studies are reviewed: 'policy and institutional fit', 'coordination between implementers' and 'preference alignment'. Consecutively, we delve into 'administrative capacity' explanations as these presented some conflicting results across studies. And finally, we provide an overview of explanations that have rarely been explored.

Consistent findings across studies

First, the studies have consistently identified the 'policy and institutional fit' between existing local and EU requirements to positively affect local implementation (e.g. Kołsut, 2016; Tortola, 2016; Filčák, 2016; Dörry and Decoville, 2016; Johannessen and Granit, 2015; Pflieger, 2014; Annunziata et al., 2014; Manos et al., 2014; Blok, 2012; Andersson et al., 2012; Oliveira and Breda-Vazquez, 2011; Grodzinska-Jurczak and Cent, 2011; López-Santana, 2009; Halpern, 2005). If existing local implementation practices are aligned with EU policy objectives and instruments, implementation of EU policy is likely to follow smoothly. This explanation is in

line with a few studies on EU practical implementation research (e.g. Börzel, 2003; Knill, 2001; Knill and Lenschow, 1998, 2000).

The variable 'coordination between implementers' also received support across very different studies. This explanation is also in line with a few studies on EU practical implementation (e.g Hartlapp, 2013; Jensen, 2007). EU local implementation studies specify this explanation by distinguishing between 'vertical coordination', 'horizontal coordination', and 'sectoral coordination'. We will briefly consider these arguments.

Table 5.5: Theoretical analysis

				Number of different ~			
Explanations derived for the extent of implementationw		**Nature of relation**	**Number of studies (N=85)**	**~Methods (N=9)**	**~Countries (N=21)**	**~Policy fields (N=15)**	**~Policy obligations (N=7)**
1.	Policy and institutional fit	+	17	7	12	10	6
2.	Coordination between implementers						
	Horizontal coordination	+	18	6	12	11	4
	Vertical coordination	+	17	5	11	11	4
	Sectoral coordination	+	14	5	9	7	5
3.	Preferences alignment	+	13	6	7	9	2
4.	Administrative capacity						
	Financial resources	*	12	6	7	7	4
	Expertise	+	6	4	5	6	4
	Time constraints	-	5	4	5	5	3
	Size	*	4	2	4	4	3
5.	Saliency	+	7	3	3	3	3
6.	Monitoring	+	3	2	3	3	2
7.	Framing	+	8	5	6	5	2
8.	Leadership/ policy entrepreneurship	+	3	3	3	3	2
9.	Electoral change	+	2	1	2	2	2

*Legend: + positive relationship; - negative relationship; * conflicting evidence on the nature of causal relationship;*
Note: ◆ Most studies have listed different explanations at the same time.

The studies found consistent evidence that a high degree of 'vertical coordination' between different levels of government can facilitate implementation (Hurtado, 2017; Gray et al., 2017; Dovlén, 2016; Giardullo et al., 2016; Guderjan and Miles, 2016; Baldinelli et al., 2015; Root et al., 2015; Pietrzyk-Kaszyńska and Grodzińska-Jurczak, 2015; Flannery, 2015; Shiers et al., 2014; Entwistle et al., 2014; Galiana et al., 2013; Minoia et al., 2009; Armstrong and Wells, 2006; Blom-Hansen, 2005). As local implementers might have different ideas about policy implementation than their national principals, vertical coordination between government levels becomes important to effectively reach policy objectives (e.g. Artmann, 2016; Pietrzyk-Kaszyńska and Grodzińska-Jurczak, 2015; Root et al., 2015). This way, the local governments feel supported by higher-level government (e.g. Root et al., 2015). Vice versa, an unclear division of labour between different levels of government was shown to hamper the local implementation of EU policy (e.g. Baldinelli et al., 2015; Galiana et al., 2013; Shiers et al, 2014). Additionally, eight studies even listed improving vertical coordination between government levels as a recommendation for practitioners wishing to improve EU implementation (e.g. Artmann, 2016; Baldinelli et al., 2015; Pietrzyk-Kaszyńska and Grodzińska-Jurczak, 2015; Flannery et al., 2015; Shiers et al., 2014; Galiana et al., 2013; Laspidou et al., 2011; Monni and Raes, 2008). However, as these recommendations specify, the creation of more bureaucracy stemming from coordination should be avoided. Instead the actors should strive for an agreement about the policy goals and how to interpret them (Root et al., 2015).

The studies also found positive effects of 'horizontal coordination' or stakeholder involvement, on policy implementation (e.g. Dovlén, 2016; Filčák, 2016; Dörry and Decoville, 2016; Trapani and Minozzi, 2015; Armstrong and Wells, 2006). These studies contribute high levels of implementation to early involvement of stakeholders in local policy implementation (Filčák, 2016; Hlepas, 2016; Baldinelli et al., 2015; Grodzinska-Jurczak and Cent, 2011). Johannessen and Granit (2015) noted that it is important to include not only policy experts but also other local stakeholders in order to create broad support among policy addressees (Johannessen and Granit, 2015; Manos et al., 2014). Vivash et al. (1998) added that for coordination to run smoothly it is important to have one actor responsible for the whole coordination and initiation process. Striving for horizontal coordination can be problematic and risky, as stepping into someone else's jurisdiction can create conflicts (Dovlén, 2016) and local governments are not always open to stakeholder involvement (Trapani and Minozzi, 2015). In the border regions, municipalities found it especially challenging to coordinate with their peer municipalities on the other side of the border, due to differences in national policy traditions (Dörry and Decoville, 2016). Yet, once these municipalities managed to coordinate their policies, they acknowledged the added value of this coordination (Dörry and Decoville, 2016). Twelve studies also recommended investing efforts to improve horizontal coordination among stakeholders in order to enhance implementation performance (e.g. Grodzinska-Jurczak and Cent, 2011; Scheinberg and Mol, 2010; Ledoux et al., 2000). Scheinberg and Mol

(2010) even showed that ideational differences among stakeholders can be overcome through regular horizontal coordination which would lead to better implementation performance.

The last aspect of 'coordination between implementers', is 'sectoral coordination'. It specifies coordination to integrate different policy sectors within local government level. This coordination ranges from non-existent to an integrated approach. In order to produce integrated policy implementation different departments of a local government have to be in close contact with each other to recognize opportunities for close cooperation and thus also enhance policy efforts (e.g. Trapani and Minozzi, 2015; Gullstrand et al., 2003). When there is no integration of sectors, the policy is approached from separate policy sectors angles. The studies consistently support the finding that integrated sectoral coordination of local policy implementation produces better policy implementation than less integrated approaches (e.g. Artmann, 2016; Hartmann and Spit, 2015; Trapani and Minozzi, 2015; Shiers et al., 2014; Galiana et al., 2013; Alphandéry and Fortier, 2010). For example, the limited sectoral coordination in local governance hampered integrative innovative solutions in urban regeneration strategies (Hurtado, 2017), landscape development policies (Dovlén, 2016), flood risk management (Johannessen and Granit, 2015), and Natura 2000 (Vikolainen, 2013). There is evidence that municipalities that approach sustainability policy or water policy only from an environmental policy angle – instead of taking a more holistic approach, manage to take fewer measures than municipalities with a more integrated approach (e.g. Vikolainen, 2013; Gullstrand et al., 2003). Four studies also encouraged practitioners to invest in policy integration at the local level (e.g. Ledoux et al., 2000).

The last explanation that received consistent support throughout different studies is the alignment of 'preferences' of key actors in the implementation (Gray et al., 2017; Zimmermann, 2016; Miranda et al., 2016; Świerczewska-Pietras, 2015; Root et al., 2015; Hartmann and Spit, 2015; Pflieger, 2014; Dąbrowski, 2012; Vivash et al., 1998). Hartmann and Spit (2015) found evidence that policy preference congruence between politicians and administrative staff positively affected implementation performance. Similarly, Vikolainen (2013) showed that it is important to achieve an alignment of policy preferences among local stakeholders and local administration for implementation to be comprehensive. Scheinberg and Mol (2010) suggested that through stakeholder involvement, differences in preferences can be overcome.

Administrative capacity explanations

The 'administrative capacity' explanation did not always receive consistent support across the studies. EU local implementation studies specify this explanation by distinguishing between 'financial resources', 'municipal size', 'expertise' and 'time constraints'. There is conflicting evidence on whether 'financial resources' and 'size of municipality' have an effect on local implementation. While some studies identified financial resources as a necessary condition for policy implementation (eg. Root et al., 2015; Benito et al., 2015; Salvalai et al., 2015; Shiers et al., 2014; Van der Hoek, 2014; Dąbrowski, 2012; Laspidou et al, 2011; Spaan et al., 2010),

other studies demonstrated that financial limitations were overcome by willing implementers and were not crucial for policy implementation (Zimmermann, 2016; Miranda et al., 2016; Annunziata et al., 2014; Gullstrand et al., 2003). The bigger the size of the municipality in terms of population, the more non-compliance was evidenced with local government debt obligation (Benito et al., 2015). Yet other studies found no evidence that the size of city population impacted implementation performance (Annunziata et al., 2014; Kołsut, 2016; Gullstrand et al., 2003). Evidence for a positive association of expertise and time constraints explanations with implementation performance was more consistent. A lack of 'expertise' and know-how lead to problems in local implementation of EU policy (Hurtado, 2017; Shiers et al., 2014; Spaan et al., 2010; Gullstrand et al., 2003). Annunziata et al. (2014) demonstrated that capacity building through training positively affected policy implementation. A lack of 'time' to implement a policy was attributed to lower levels of policy implementation (Hurtado, 2017; Scheinberg and Mol, 2010; Monni and Raes, 2008; Gullstrand et al., 2003; Halpern, 2005).

Considering the evidence for the administrative capacity explanations, the number of studies presenting this as an explanation for local implementation and the number of different countries and policy sectors this explanation has been observed, there needs to be more research into how administrative capacity affects local implementation. It is crucial to understand whether this explanation holds at the local level, as it has a direct bearing on strategies to improve local implementation (cf Bondarouk et al., 2019; Tallberg, 2002). If administrative capacity indeed does not always improve local policy implementation, investments in administrative capacity would miss their target.

Rarely explored explanations

Five explanations have rarely been explored. Two of those were derived from the existing EU compliance literature, while three more emerged inductively from the sample.

First, seven studies acknowledged the role of 'saliency' in local implementation. If a EU policy problem was salient at the local level it tended to be implemented more comprehensively (Gray et al., 2017; Zimmermann, 2016; Root et al., 2015; Hartmann and Spit, 2015; Van der Hoek, 2014; Conte et al., 2012). Salvalai et al. (2015) showed that it was a challenge for local administration to make local public and political institutions aware of certain EU technocratic issues such as energy performance of buildings and convince them of the urgency to take action. We need to understand better how local governments make EU policies work under different saliency conditions. For example, what strategies they could use to attract attention to the policies to ensure policy implementation. A recent study of air quality implementation at local level (Bondarouk et al., 2019) demonstrated that saliency was the driving mechanism of comprehensive policy implementation.

Second, only three studies examined the role of 'monitoring' in local policy implementation. There is evidence that a lack of 'monitoring' hampered local policy delivery

(Filčák, 2016; Shiers et al., 2014; Spaan et al., 2010). These studies advised for strong monitoring systems in order ensure policy compliance. Yet, we need more research on this explanation.

Additional explanations that emerged in systematic literature review are 'framing', 'leadership and policy entrepreneurship' and 'electoral change'. Yet, only a few studies considered these explanations. Thus, more research is necessary to examine these explanations. Eight studies attributed differences in implementation at the local level to different ways of 'framing' EU policy at the local level (eg. Dovlén, 2016; Root et al., 2015; Hartmann and Spit, 2015; Pietrzyk-Kaszyńska and Grodzińska-Jurczak, 2015; Dąbrowski, 2012). Some municipalities associated EU policies with opportunities or with bottom-up creation of local policy, while others associated it with constraints or top-down EU interference (Barbehön, 2016; Skandrani and Prévot, 2015; Alphandéry and Fortier, 2010). In the latter cases, implementation was less comprehensive and support for EU policies was lower. The question remains whether and how negative framing can be rendered more positive and under which conditions that may occur.

Finally, very little attention has been paid to the role of political explanations, such as 'leadership and policy entrepreneurship' (Hlepas, 2016; Root et al., 2015; Vivash et al., 1998) and 'electoral change' (Benito et al., 2015; Fałkowski, 2013) in EU local implementation. This is surprising given the fact that local governments are considered to be political arenas were political parties strive for re-election.

5.6 CONCLUDING REMARKS AND RESEARCH AGENDA

Local governments play a crucial role in the EU's multi-level implementation structure. While EU compliance research has persistently called for more research into practical implementation, a separate stream of research on EU local implementation has produced a vast stock of knowledge on the topic. The objective of this article was to take stock of existing academic knowledge on EU local complementation, review how these studies relate to EU compliance research, and develop a research agenda. A thorough review of 85 studies on EU local implementation revealed what topics are addressed and what explanations are put forward in the EU local implementation studies. Based on a descriptive and theoretical analysis of these studies, we draw seven important conclusions on EU local implementation research and propose corresponding recommendations for future research.

The descriptive analysis reported in this paper reveals four important recommendations for future research. First of all, the majority of studies was interested in documenting best practices or explaining differences among *compliant* cases. The majority of these studies focused on best practices in order to draw lessons on how to implement a certain EU policy. In doing so, most of local EU implementation studies examined environmental policies. Recent research showed that overall non-compliance with EU environmental policies is decreasing

over time (Börzel and Buzogány, 2019). Hence, more research is necessary to determine whether compliance at the local level is indeed an empirical reality or is it just bound to a specific policy field. Local governments are also responsible for the implementation of other policies, which might be more problematic to comply with. Notwithstanding the importance of environmental policy or learning from best practice cases, such case selection is likely to bias our knowledge on multi-level governance effectiveness.

Second, we have pointed out that more research is warranted for the examination of compliance with two special procedural obligations of EU policies: local policy integration and stakeholder participation. With regard to the former, a public consultation by the European Commission (2015) identified the integration of EU policies at the local level as one of the most pressing challenges of EU implementation. Yet, there are only a few studies examining this procedural obligation. With regard to the latter, the EU Commission has put high hopes on the use of stakeholder participation in EU legislation as it is hypothesised to increase legitimacy of EU policies and thus improve implementation of EU policies. The review shows that there is a high percentage of studies documenting local government inability to live up to EU obligations to consult stakeholders. Therefore, whether the EU Commission's hopes are justified remains to be seen.

Third, none of the studies in the sample examined whether implementation at the local level is congruent with national transposition of EU legislation. The common practice is to compare local implementation with EU policy, without reflecting on how local implementation relates to national transposition. This way, the multi-level character of EU policy implementation somehow disappears from these studies. Without the knowledge on how different government levels relate to each other, it becomes difficult to fully assess the effectiveness of EU multi-level implementation. Therefore, more attention to this aspect seems warranted.

Fourth, just as EU compliance studies, EU local implementation research has paid disproportional attention to environmental policies. As this policy field is distinctively one of the most Europeanised ones (Börzel and Buzogány, 2019), it is important to examine other policy fields in order to examine the generalisability of these findings to other policy fields. Comparing implementation of environmental policy to newer EU policy fields, e.g. social policy, migration and asylum policies, or internal market policy, will ultimately strengthen our knowledge on the explanatory power of explanations derived in EU local implementation research.

The theoretical analysis reported on in this paper leads to three important recommendations for future research. First of all, while individual EU local implementation studies are highly descriptive and explorative, several studies have consistently shown a number of explanations as the most promising ones. These are policy and institutional fit between local and EU policy requirements, coordination between implementers, and preference alignment among implementers. Several studies have even recommended

improving vertical and horizontal coordination as factors that could positively affect local implementation It is time to subject these explanations to rigorous explanatory research designs. While a quantitative design seems to be too ambitious for the field where data collection is quite cumbersome, other research designs could fit the purpose equally well. For example, the research field would benefit from a more purposeful case selection for theory testing (see Blatter and Haverland, 2012; Rohlfing, 2012). Qualitative comparative analysis could also offer ways how to design an explanatory research designs (see Thomann and Maggetti, 2017).

Second, the theoretical analysis revealed that at least six out of nine explanations that emerged in the review are in need of more systematic examination. Studies that have considered administrative capacity explanations revealed inconsistent results on their impact on local implementation. As we have argued, more understanding of these explanations is urgent in light of the direct consequences of how one can remedy poor implementation. If we intend to invest in administrative capacity building to improve implementation, we need to know when it is effective.

Finally, while most attention has been paid to institutional, preference-based and capacity explanations, very little attention has been paid to the role of political explanations, such as leadership and policy entrepreneurship, electoral change and saliency in EU local implementation. This is surprising given the fact that local governments are political arenas were political parties pursue re-election. Hence, more research on politics of local implementation is recommended.

6.

Conclusion

6.1 INTRODUCTION

EU compliance research that has looked at how EU member states implement EU policies has been flourishing for years (Angelova et al., 2012; Mastenbroek, 2005; Thomann and Sager, 2017; Treib, 2014). Yet some puzzles remained unaddressed, as becomes evident by a set of national court cases on the implementation of the EU Ambient Air Quality directive, as set out in the introduction to this thesis. In particular, the following three puzzles were identified, which form the groundwork for this thesis.

First, these national court cases revealed the struggle to identify what constitutes comprehensive local EU policy implementation. The national courts repeatedly ruled that local implementation measures were not comprehensive enough. Yet, what constitutes the comprehensiveness of implementation remained ambiguous. The EU directive leaves it up to the implementers' discretion to decide what measures should be included in an AAQ management plan (Article 23). EU compliance research has so far provided little guidance on how to assess what constitutes compliance with such discretionary clauses (Bondarouk and Mastenbroek, 2018; Zhelyazkova, 2013; Zhelyazkova and Torenvlied, 2011).

Secondly, the national court cases showed that local governments to a large extent were responsible for ensuring compliance with EU AAQ directive. While local governments emerged as political arenas where EU policies are being shaped on the ground, the scholarly community of EU compliance research has paid little attention to these local actors (Bondarouk, 2017; Goldsmith, 2005; Ladrech, 2010; Panara, 2015; Van Bever et al, 2011). At the same time, EU compliance research acknowledges that the need to look beyond transposition of EU directives in order to determine to what extent member states make EU policies work (cf Thomann and Sager, 2017; Versluis 2007). Hence, the question arose what do we actually know of *local* policy efforts to make EU policy work?

And finally, the court cases revealed great intra-state implementation variety, i.e. different practices at the *local level*. Some local governments managed to comply with the limits, while others were taken to court. Those who complied displayed a considerable difference in efforts as well. Thus, the question arises how we can understand these puzzling local differences in EU policy implementation.

These three puzzles resulted into the following research question: *How can we explain why Dutch municipalities differ in their implementation performance of the EU Ambient Air Quality directive?* To address this question and the puzzles, four studies were carried out. The first study (Chapter 2) analysed how we can conceptualise implementation performance. The second study (Chapter 3) mapped the differences in EU AAQ local implementation in 13 Dutch cities over 10 years by using the conceptual framework proposed in Chapter 2. The third study (Chapter 4) continued the empirical analysis and examined how the differences in local implementation can be explained. The final study (Chapter 5) conducted a systematic review

of EU local implementation studies to put the findings of the third study in perspective and develop a research agenda for EU local implementation.

This concluding chapter summarizes and reflects upon the key findings and limitations of the four studies. Subsequently, the contribution to EU compliance research is discussed. The chapter ends with implications for practice.

6.2 THE FIRST STUDY: CONCEPTUALIZING EU COMPLIANCE

The first study (Chapter 2) dealt with the following sub-question: *how can implementation performance be conceptualised in order to go beyond the dichotomous understanding of correct compliance and to capture variation in policy implementation?* Taking guidance from national policy implementation, policy analysis, policy design, policy evaluation and policy change research, it proposed to define implementation performance as the intensity of policy outputs undertaken by implementers in response to EU policy instruments. Given the importance of open norms and procedural requirements in EU directives, the concept of implementation performance does not only have a vertical focus, i.e. aimed at comparing implementation with EU rules, but also a horizontal focus, i.e. aimed at comparing implementation practices between various implementing actors within the member states.

The proposed concept of implementation performance examines the intensity of policy outputs along the three dimensions of *substance*, *scope* and *effort*. The *substance* dimension, relates to the central issue that is to be regulated. The second dimension concerns the *scope* of implementation: where, when and to whom does the policy task apply. The final dimension focuses on the *effort* implementers put into accomplishing a policy's goals. These dimensions are further refined with the help of ten aspects. As practical implementation can differ on these aspects, implementation performance can thus be assessed considerably more comprehensively than by employing the traditional compliance/non-compliance dichotomy and be meaningfully compared among implementers.

This study also assessed whether the conceptual framework is complete, and whether the dimensions are mutually exclusive. It did so by examining how well the conceptual framework can subsume empirical findings on the practical implementation of EU environmental policies under the dimensions and aspects of the conceptual framework. An intercoder reliability test was performed in order to examine whether other scholars would subsume the same information under the same dimensions. In this way, the study also aimed to assess the usability and reliability of the framework.

While this examination demonstrated that the conceptual framework was able to capture consistently the rich practices of EU practical implementation, it also revealed that our knowledge of practical implementation of EU environmental directives is fragmented and incomplete. This is despite the claims that environmental policy is one of the most researched

policy fields among different EU policies (Angelova et al., 2012; Börzel and Buzogány, 2019; Treib, 2014). While the 'substance' dimension has received most attention in the literature, hardly any attention has been paid to the 'scope' and 'effort' dimensions. Hence, in order to understand to what extent the member states really make EU policies work, the second chapter argued that there is a need for a systematic approach to study implementation performance. We need a much more granular understanding of where, how and what is lacking in policy implementation. This conceptual framework can facilitate such an understanding by offering a fully-fledged conceptualisation of implementation performance.

While embarking on a quest to come up with a framework that can conceptualise implementation performance beyond the dichotomous understanding of correct compliance and capture variation in policy implementation, this thesis applied the framework only to environmental policy. Hence, to what extent this framework is applicable beyond environmental policy remains to be seen in future research. At the same time, the framework was primarily derived from general literature on national policy implementation, policy analysis, policy design, policy evaluation and policy change research. Therefore, it is potentially suitable for other policies as well.

6.3 THE SECOND STUDY: EU COMPLIANCE AND LOCAL GOVERNMENTS

The second study (Chapter 3) dealt with the following sub-question: *What are the differences between Dutch municipalities in the implementation of the key procedural Article 23 of the EU Ambient Air Quality directive 2008/50/EC?* It applied the earlier constructed conceptual framework of implementation performance to the local implementation of EU AAQ plans (Article 23 of the AAQ directive) in 13 Dutch medium-sized municipalities. Eighteen interviews and 237 policy documents over the period of 2000-2015 informed the analysis. The analysis demonstrated that all local governments formally complied with the Article 23 obligation of having an AAQ plan. Crucially, the study revealed a more nuanced picture on *(over-)compliance and local variation* in implementation. In addition, this study also demonstrated important *similarities* between local AAQ plans. This section shortly outlines these findings.

The second study demonstrated over-compliance *relative to the EU directive* and over-compliance *relative to its national transposition*. First, over-compliance relative to the AAQ directive was observed, as 6 municipalities aimed for stricter AAQ standards than required by the EU directive and its Dutch transposition. Second, over-compliance relative to the national transposition of the directive was observed, as 5 municipalities established their own AAQ monitoring and public information system. The national authorities were formally responsible for both monitoring and public information. This finding shows that local governments may be willing and capable of going beyond the regulatory minimum, indicating that national expectations are not always 'dashed locally' (Pressman and Wildavsky, 1984).

While there was a lot of variation at local level, the second study also demonstrated *similarities* among local AAQ policy plans. As the procedural obligation of designing an AAQ plan allowed for local discretion on which measures to be taken, it introduced an element of uncertainty about which measures *should* be taken and which measures were effective. Therefore, local governments sought out best practices and information platforms to reduce this uncertainty and ended up taking the same type of measures. This information exchange was facilitated by the national air quality coordination strategy. In this case, more discretion did not result into more differences but ignited the need to cooperate between different levels of government, which effectively contributed to meeting the EU AAQ requirements. However, while in the Netherlands this discretion seems to have turned out well, it remains to be seen what effect it has in other member states. Hence, the findings of the second study need to be complemented by comparative research in order to see whether it has any external validity.

The second study also illustrated the value of the conceptual framework proposed in the first study (Chapter 2). As traditional conceptualisations of implementation would have focused on only one of the dimensions of the framework, i.e. the 'substance' dimension (see Bondarouk and Mastenbroek, 2018), it would have yielded very different conclusions on implementation performance results. For instance, instead of branding an implementer as the best performer based merely on the fact that it took most measures, the present framework took into account how these measures were defined as well as where, to whom and since when they applied. This resulted in a considerably more detailed picture of implementation, which enriched our understanding of the extent to which local governments make EU policies work.

Summing up, this study illustrated how local governments make EU policies work. In contrast to top-down implementation research (e.g. Pressman and Wildavsky, 1984; Sabatier and Mazmanian 1980), it showed a more optimistic picture of local implementation. However, this optimism should be interpreted with caution. First, this research did not aim at establishing a link between scores on the implementation performance and actual air quality improvement. It hence did not relate policy outputs to policy outcomes (see Knill et al., 2012). Which policy measures work best to improve air quality is an entirely different question, which should be analysed differently. This remains a highly pertinent question, especially since research has shown that EU air quality standards are in fact too low to adequately protect human health (Brunekreef et al., 2012). Therefore, even in cities where implementation performance was high, air quality might, after all, be insufficient.

Second, whether Dutch AAQ local implementation is representative of other member states' implementation is up to further research. The introductory chapter of this thesis started with court cases in three different member states, and pointed out that the EU Commission has taken at least six member states to court because of their negligence to comply with AAQ directive. Hence, the apparent success story of Dutch implementation might not be as representative of the rest of the EU as one could have hoped. At the same time, this study does

offer valuable suggestions for those member states seeking to improve AAQ. The national air quality coordination programme has been credited by many interviewees as a crucial part of the implementation success in the Netherlands. Many respondents on the national and local level have endorsed this form of collective action by different levels of government as the key to getting the AAQ implementation out of its initial deadlock. This finding is also backed by the systematic literature review conducted in the final study (Chapter 5), which showed evidence from other studies on different member states and policies that EU local implementation benefits from coordination between different levels of government.

6.4 THE THIRD STUDY: EXPLAINING DIFFERENCES IN EU LOCAL IMPLEMENTATION PERFORMANCE

The third study (Chapter 4) addressed the following sub-question: *To what extent can differences in Dutch local implementation of the EU Ambient Air Quality directive 2008/50/EC be attributed to political or managerial considerations?* It built upon the analysis of AAQ local implementation in the second study and zoomed in on four municipalities that formally complied with the AAQ directive but scored differently on implementation performance. The four municipalities that scored the highest/lowest were selected for an in-depth examination of the conditions for comprehensive EU implementation. Data were gathered through document analysis and interviews with 37 respondents involved in AAQ implementation in the period of 2005-2015.

This study showed that the observed differences in local implementation performance were better explained by the political approach than by the management approach. These two approaches have two different points of departure. The political approach stresses the importance of political will to implement policies. This approach was disentangled into four specific explanations: policy preferences, policy saliency, interest group pressure, and policy entrepreneurship. The management approach, by contrast, assumes that implementation is not a matter of calculated willingness, but of implementers' capacity to do so. The management approach was also disentangled into four specific explanations: internal coordination, external coordination, policy experience and knowledge, and personnel stability

By conducting a theory-driven, comparative within-case analysis, this study complemented earlier research on policy saliency (Versluis 2007) showing how saliency may interact with other variables. High policy saliency emerged as the main driving force behind local differences in EU implementation, which in combination with ambitious policy preferences and entrepreneurship of both policy officers and political actors determined high implementation performance. In addition, frequent internal coordination between different policy departments within local government contributed to high implementation performance, by enabling and strengthening the preference alignment of policy officers and political actors.

When it comes to the representativeness of this causal mechanism, the final study of this thesis (Chapter 5) offers a reflection on external validity. Chapter 5 systematically reviewed a large number of EU local implementation studies. It revealed that the explanations of policy preference alignment and an integrated approach to policy implementation with high internal coordination between different departments of local government also found support in other EU local implementation studies. Therefore, one may reasonably expect that differences in EU local implementation performance of (at least) North-Western EU member states will exhibit the same causal mechanism. These member states are characterised by relatively similar environmental awareness and economic development.

Nevertheless, one should be cautious about the extent to which political variables can explain local *compliance* with AAQ directive. All four municipalities complied with the procedural obligation to have an AAQ management plan in the first place. Thus, similar scores on management variables could not explain differences in implementation performance between municipalities. At the same time, all municipalities took similar type of measures and were compliant as they all had a management plan. Hence, similar scores on management variables could potentially explain the similarities between municipalities. In other words, politicisation explained the differences in local implementation performance, but management variables could potentially explain the compliance record in Dutch cases. Whether the latter is indeed the case, should be subjected to rigorous comparative research.

This question is especially pertinent to find out because the final study of this thesis (Chapter 5) demonstrated that EU local implementation studies revealed inconsistent results on administrative capacity explanations, such as municipal size and financial resources, and their impact on local implementation. More understanding of these explanations is urgent in light of the direct consequences of how one can remedy poor implementation. If we intend to invest in administrative capacity building to improve implementation, we need to know when and whether it is effective.

6.5 THE FOURTH STUDY: THE SYSTEMATIC REVIEW AND RESEARCH AGENDA

The final study of this thesis (Chapter 5) reviewed 85 studies on EU local implementation. While EU compliance scholars have persistently called for looking beyond transposition, a separate stream of research on EU local implementation has produced a vast body of knowledge on EU practical implementation. These EU local implementation studies are scattered across many different policy-specific journals, and are characterized by descriptive research designs, making it difficult to draw theoretical lessons from each individual study. As a result, knowledge accumulation has been restricted. Therefore, the fourth study took stock of the existing academic knowledge on EU local implementation, reviewed how these studies

relate to EU compliance research and to the previous chapters of this thesis, and developed a research agenda.

First, the systematic literature review revealed that the majority of EU local implementation studies aimed at documenting best practices or explaining differences among *compliant* cases. In doing so, most of the local EU implementation studies examined environmental policies. This thesis is also in line with this practice, as the second and third studies of this thesis also reported on compliant cases with an environmental directive. Thus, more research is necessary to determine whether compliance at the local level is indeed an empirical reality or if it is just bound to a specific field of environmental policy. Local governments are also responsible for the implementation of other policies, which might be more problematic to comply with. Notwithstanding the importance of environmental policy or learning from best practice cases, such case selection is likely to bias our knowledge on the state of compliance at local level.

Second, the final study pointed out that more research is required for the examination of compliance with two special procedural obligations of EU policies: local policy integration and stakeholder participation. With regard to the former, a public consultation by the European Commission (2015) identified the integration of EU policies at the local level as one of the most pressing challenges of EU implementation. With regard to the latter, the EU Commission has put high hopes on the involvement of stakeholders to increase legitimacy of EU policies and thus improve implementation. The review shows that so far, many local governments are unable to live up to the EU obligation to consult stakeholders. Therefore, whether these procedural obligations function according to their design remains to be seen.

Third, the final study showed that the reviewed studies did not analyse the congruence of local policies with national transposition of EU legislation, but only with EU policy. Without this knowledge on how different government levels relate to each other, it becomes difficult to fully assess to what extent the different levels of government implement EU policies and reflect on the policy design choices of each level of government and their interrelation. Chapter 3 of this thesis showed that by systematically reviewing how local implementation relates to the EU directive *and* to its national transposition, one can establish if, where and in which form local 'toppings' of AAQ legislation exist. Therefore, more attention to this aspect seems warranted.

Finally, the systematic review revealed that most existing studies on EU local implementation are highly descriptive and exploratory. A few explanations emerged as the most promising ones. The policy and institutional fit between local and EU policy requirements, coordination between implementers, and preference alignment among implementers positively impacted local implementation of EU policies. Several studies have recommended improving vertical and horizontal coordination as factors that could positively affect local implementation. These explanations could now be subjected to rigorous explanatory research designs. While a quantitative design seems to be too ambitious for the field where

data collection is quite cumbersome, other research designs could fit the purpose equally well. For example, this thesis demonstrated that a more purposeful case selection for theory testing as employed in chapter 4 offers a fruitful way for designing a more deductive research approach.

6.6 CONTRIBUTION TO EU COMPLIANCE RESEARCH

In sum, this thesis offers five important contributions to EU compliance research. First of all, it offers a new systematised concept of implementation performance to facilitate a systematic analysis of differences in practical implementation across implementers. It thus enables researchers to move beyond a dichotomous conceptualisation of compliance in order to unmask the rich variance in implementation of EU policies. This is especially relevant in the analysis of procedural obligations, which allow for highly different, while fully compliant policy responses. This thesis demonstrated that even among compliant cases, we can discern crucial differences that need to be assessed in order to understand the extent to which local governments make EU policies work.

Second, this thesis added to the discussion on compliance with EU directives by demonstrating a great intra-state implementation variety, i.e. different practices at the local level. While all local governments complied with the procedural obligation of producing a policy plan under the EU AAQ directive, some took their implementation tasks more seriously than others. This reveals a leader and laggard dynamic at the local level. Some local governments even showed clear signs of over-compliance. Hence, it would be a mistake to see local governments as the *only* implementers of supra-national policy decisions. This thesis shows that local governments *actively shape* how EU policies are delivered to EU citizens.

Third, this thesis bolstered our confidence in theoretical explanations offered in EU compliance research. Most EU compliance research looks at one point in time to assess EU implementation. This thesis gathered data over *10 years* of local policy implementation and demonstrated that the same explanations are still relevant. Additionally, the explanations derived from EU compliance research refer to the *timeliness* of *transposition* data. This thesis, demonstrated that the *content of practical implementation* could also be assessed using the same explanations.

Fourth, while most existing EU local implementation studies are very explorative in nature, this thesis offers a way for a deductive theory-driven research design. While giving due attention to the depth of qualitative research design, this thesis has merged comparative cross-case analysis with comparative within-case analysis in order to isolate causal mechanisms. Implementation research is infamous for suggesting more than 100 explanatory variables that could explain implementation. By showing how cross-case analysis could be complemented

by within-case analysis, this thesis offers a way of disentangling and assessing the complexity of implementation.

Finally, this thesis offers a systematic literature review of EU local implementation studies. EU compliance research has so far claimed that not much is known on the practical implementation of EU policies. Yet, EU local studies have produced a vast amount of knowledge on what happens to EU policies at local level. The systematic literature review shows how these studies relate to EU compliance research and assesses the gaps in our knowledge on EU local implementation.

6.7 IMPLICATIONS FOR PRACTICE

In addition to the theoretical advances set out above, this thesis provides several tangible implications for practitioners. In the following section, lessons for local governments, national governments and EU policy-makers are discussed.

First of all, *local governments* are advised to invest in internal coordination for the implementation of complex EU policies. While all Dutch municipalities have shown to be very well organised externally, i.e. they were well-connected in different networks and participated in different policy platforms, one of the key differences between leaders and laggards flowed from their ability to coordinate between the different departments within the local government itself. Most EU policies are multi-disciplinary and touch upon different policy fields at the same time. Hence, by pulling human and financial resources from different departments, the implementation process could be smoothened. This also has a positive effect on aligning the policy preferences of different actors and committing them to addressing EU policy challenges.

Second, *national governments* are advised to invest in coordination with local governments. In the beginning the implementation of the AAQ directive caused a lot of problems. Local governments expressed myriad concerns about their inability to conduct spatial planning projects as environmental assessments revealed that these projects would negatively impact AAQ. Hence, local governments found themselves restricted in their economic growth plans due to very strict EU AAQ standards. The national government took these concerns very seriously, which resulted in a national air quality coordination program. Accordingly, *all* levels of government committed themselves to specific AAQ responsibilities. Local governments even received financial assistance from the national government. Such coordinated collective action enabled to break the impasse and facilitate better EU implementation.

Third, *EU policy makers* are advised to be aware of discretion inherited in EU legislation which affects local implementation. Local governments actively shape how EU policies are delivered to EU citizens. As EU procedural obligations allow for different compliant policy

responses, strict enforcement of policies might not be as effective in stimulating uniform implementation as the EU Commission might hope for. Local governments faced uncertainty which measures were effective. They sought out best practices to reduce this uncertainty and ended up taking the same type of measures. Therefore a timely practical guidance from the EU Commission to local implementers on best practice policy measures, would allow the EU Commission to steer uniform local implementation more.

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Appendices

APPENDIX A:

The list of articles reviewed for the systematic literature review of Chapter 2.

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APPENDIX B:

Operationalisation and scoring of the local air quality plans

The data on the air quality plans were elaborated according to the seven aspects of the conceptual framework.

Objectives

First, the aspect of 'objectives' was operationalised in terms of the strictness of the pollutant standards that were set in the plan, as well as possible additional air quality pollutants specified in the plan. The plan would score a maximum of 3 points for calibrating stricter norms than national norms *and* adding at least one extra pollutant chemical to the list. The plan would score 2 points if only the norms were higher than the national norms, and 1 point was given to a plan in which air quality standards were similar to the national norms.

Definitional details

The second aspect, 'definitional details', was operationalised in terms of what source of pollution, e.g. car traffic, were specified in the policy. The more sources of pollution were specified the more points were given. As all municipalities in the sample of 13 medium-sized Dutch cities identified 'road traffic' as the source of pollution, there were no horizontal differences on this aspect[16]. Therefore, all municipalities received 1 point.

Territory

The fourth aspect, 'territory', was operationalised in terms of the territory to which the air quality plan applied. A plan was assigned 3 points for a regional territorial scope[17], 2 points for a municipal territorial coverage, and 1 point if a policy plan only applied to a small territorial section in the municipality. As all municipal plans in our sample concerned the territory of the municipality, there were no horizontal differences on this aspect. All municipalities received 2 points.

16 Only Nijmegen has identified water transport also as an important source of pollution. However, most of the cities in the sample do not have a water body with a busy traffic. Therefore, such comparison becomes problematic because of the differences in geographical conditions.

17 Municipalities can have an air quality plan in cooperation with other municipalities.

Addressees

The fifth aspect, 'addressees' was operationalised in terms of the size and composition of the group the plan was applicable to. 'Addressees' were scored 3 points if a measure was relevant to all citizens, 2 points for a smaller group, 1 point for the smallest[18] group. As all municipal plans concerned the whole population, there were no horizontal differences on this aspect. All municipalities received 3 points.

Expertise

The sixth aspect, 'expertise', was interpreted in terms of practical rather than scientific knowledge and operationalised in terms of stakeholders involved in the development of the air quality plan. 'Expertise' was scored on the basis of a thematic long list of all possible types of stakeholders (for example business organisations, environmental groups, civil society organisations or municipal health organisations), which was created inductively. If 6 (maximum) or 5 types of stakeholders were involved in the plan development, then the plan would be scored the maximum 3 points, if only 3 or 4 types then the plan would be scored 2 points, and if 1 or 2 types of stakeholders then the plan would score 1 point.

Prioritisation

The seventh aspect, 'prioritisation', was operationalised in terms of measures[19] that were prioritised within the plan. The more measures were identified as the focus of the policy, the more points were given. As all municipalities identified the same type of measure, which was the circulation of traffic in the city, which is a measure under 'prevention of cars in the city' category, as their 'priority', there were no horizontal differences on this aspect. Therefore, all municipalities received 1 point.

Monitoring

The third aspect, 'monitoring', denoted monitoring of the air quality policy. The plan would score the maximum 3 points for annual reports on air quality and having its own municipal air pollution measurement system, 2 points for only annual reports, 1 point for applying the national monitoring tool that is available on the national air quality website and 0 points for not specifying any enforcement mechanism at all.

The scores for all aspects were added up to form a score per municipality. The maximum score for a municipal air quality plan was 16 points.

18 A more detailed operationalisation of different degrees of size of population was not necessary as all municipal plans referred to the whole population of the municipality.

19 Not to be confused with sources of pollution. Those were coded as definitional details.

APPENDIX C:

Operationalisation and scoring of the individual air quality policy measures

The codebook

The legend:

Bold letters & numbers = category of air quality measures (There are 6 categories)
Roman numbers (I,II, etc.)= measures within the category
Arabic numbers (1,2, etc.) = definitional details
Italic letters= instructions for scoring
pt = points

1. Public transport:

On objectives: *score Public Transport category: 0 pt if 0 measures are taken; score 1 pt if 1-3 measures are taken; score 2 pt if 4-5 measures are taken, score 3 pt if all 6 measures are taken.*

I. High quality public transport: (a separate 'highway' for busses where they always enjoy priority)
   1. connection between economic hubs

On definitional: *details score High quality public transport: 0 pt if no definition is given, or 3 pt if this defi*nition is given.

II. Public transport comfort:
   1. accessibility of the bus stops and busses
   2. dynamic travel information;
   3. public order observers in the bus;
   4. frequent travel opportunities;
   5. many bus stops (a bus stop within 500m)

On definitional details score Public transport comfort: 0 pt → no comfort, 1 pt → 1definition, 2 pt → 2-3 definitions, 3 pt → 4-5 definitions.

III. Sustainable public transport:
   1. Green / natural gas
   2. Electric busses
   3. Diesel with filters (Euro V and higher)

On definitional details score Sustainable public transport: 1 pt → diesel, 2 pt → Green/natural gas, 3 pt → electric.

IV. Sustainable taxi:
1. subsidy for maintenance costs of 'green cars'
2. a local subsidy on top of national subsidy for the purchase of the cars.
3. Municipality initiates the talks with taxi companies to explain the advantages of greener cars.

On definitional details score Sustainable taxi: 0 pt → no sustainable taxi, and 1 pt → "initiate the talks…", 2 pt for "subsidy for the maintenance costs", 3 pt for "a local subsidy on top of the national subsidy"

V. Stimulate public transport usage:
1. Only non-financial stimulation
2. discounts
3. totally free

On definitional details score Stimulate public transport usage: 0 pt → no mentioning, and 1 pt → Only non-financial stimulation, 2 pt → discounts, 3 pt → totally free.

VI. Priority public transport at intersection:
1. priority to the public transport

On definitional details score Priority public transport at intersection: 0 pt → no definition is given, or 3 pt → this definition is given.

Territory: *score 1 pt → a single measure is relevant for a particular district/sections of the city, 2 pt → within the municipality, 3 pt → the whole region.*

Addressees (only applicable to "Stimulate public transport usage"): *score 1 pt → a single measure is only relevant for elderly or youngsters, 2 pt → it concerns several districts, 3 pt → the whole municipality.*

Duration: s*core 0 pt → a single measure only relevant since 2014, 1 pt → a single measure is only relevant since 2010, 2 pt → since 2005, 3 pt → already in place earlier than 2005.*

Monitoring: *not applicable for this category of measures (ie. Not applicable for Public transport).*

Table C.1: Maximum scores on Public Transport

Category of policy measures	Individual policy measure	Objectives	Definitional details	Territory	Addressees	Duration	Monitoring	Total
1. Public transport	High quality public transport		3	3	-	3	-	9
	Public transport comfort		3	3	-	3	-	9
	Sustainable public transport		3	3	-	3	-	9
	Stimulate public transport usage		3	3	3	3	-	12
	Sustainable taxi		3	3	-	3	-	3
	Priority public transport at intersection		3	3	-	3	-	9
	Total	3	18	18	3	18	-	60

Note: '-' = not applicable

2. Prevention of cars in the city (center):

On objectives: *score Prevention of cars category (if there are established AQ bottle necks by NAQCP): 1 pt → 1-2 measures is taken; 2 pt → 3-4 measures are taken, 3 pt → 5 measures are taken.*

On objectives: *score Prevention of cars category (if there are no established AQ bottle necks by NAQCP): score 1 pt → 1 measure is taken; 2 pt → 2-3 measures are taken, score 3 pt → 4 measures are taken.*

I. City center distribution
   1. Few exemptions
   2. Many exemptions
   3. Subsidy available
   4. Special arrangement for the waste collection
   5. Only facilitating role for the companies to initiate something

On definitional details score City center distribution: 0 pt → there are only certain periods of time without any distribution plan and/or many exemptions are possible; 1 pt → municipality fulfills only a facilitating role; score 2 pt → there is a distribution system at place but there are a lot of exceptions, score 3 pt → only few exceptions are at place and/or there is a underground waste-system/subsidy available.

II. Transferia/P&R
   1. P&R connected to public transport facilities
   2. P&R connected to bicycle facilities
   3. P&R signs are well visible coming from the highways
   4. Extra busses on holidays

On definitional details score Transferia/P&R: 0 pt → no P&R is available, 1 pt → for having a bicycle facilities, 2 pt → for P&R to be connected to other sorts of transport, 3 pt → if the signs are there (the visitors are well aware of the P&R possibilities) and/or there are extra busses coming during holiday

III. Environmental Zone*
   1. Dynamic traffic management boards that regulate when the zone is functional
   2. Traffic signs indicating that you have entered the zone
   3. Few/many exemptions possible

On definitional details score environmental zone: score 1 pt → many exceptions, 2 pt → traffic signs + few exceptions, 3 pt → dynamic traffic management boards

*(*One can only have an environmental zone in the city if there are established AQ bottle necks following the national guidelines. So if a city already complies with AQ according to national standards, it is not allowed to have an environmental zone)*

IV. Parking policy
1. Dynamic parking information systems show where to park
2. Increase the parking fee
3. Decrease the number of parking lots
4. Parking spot fee gets exponentially larger if to have a second car

On definitional details score parking policy: 1 pt à 1 definition, 2 pt à 2-3 definitions, 3 pt à all 4 definitions.

V. Circulation measures
1. Dynamic route installation
2. Green waves
3. Depending on the type of road and whether there are bottlenecks a priority at traffic lights is given to the trucks/cars/public transport/or bicycles
4. Physical alteration of infrastructure (eg 'pockets' for busses, bridge to divert the flow of traffic from the city center, physical alteration of the roads to slow down the traffic , widening of the road at the intersections, adoption of one-way traffic)

On definitional details score Circulation measures: 1 pt → 1 definition, 2 pt → 2-3 definitions, 3 pt → all 4 definitions.

Territory (not applicable to City center distribution): *1 pt → a single measure is relevant for a particular district/sections of the city, 2 pt → if within the municipality.*

Addressees (only applicable to environmental zone & parking policy): *1 pt → a single measure is only relevant for a few businesses (eg. trucks) if applicable, 2 pt → if it also concerns a smaller pick-up trucks/visitors, 3 pt → the whole municipality (so also the citizens).*

Duration: *score 0 pt → a single measure only relevant since 2014, 1 pt → a single measure is only relevant since 2010, 2 pt → since 2005, 3 pt → already in place earlier than 2005.*

Monitoring: *only applicable to environment zones + circulation: 1 pt → having the fines at place or just mentioning that there is monitoring, 2 pt → irregular controls/monitoring, 3 pt → camera control/or other form of regular/systematic control/monitoring.*

Note (if environmental zone is not allowed): on Prevention of cars in the city category the max number of points are: 3 (for objectives) + 12 (for definitional details on 4 measures) + 3 (for enforcem. Mechanism on 1 measure) + 6 (for Territory on 3 measures) + 3 (for Addressees) + 12 (for Duration on 4 measures) = 39 points.

Note (if environmental zone is allowed): on Prevention of cars in the city category the max number of points are: 3 (for objectives) + 15 (for definitional details on 5 measures) + 6 (for enforcem. Mechanism on 2 measures) +8 (for Territory on 4 measures) + 6 (for Addressees on 2 measures) + 15 (for Duration on 5 measures) = 53 points.

Table C.2: Maximum scores on Prevention of cars in the city (centre)

Category of policy measures	Individual policy measure	Objectives	Definitional details	Territory	Addresses	Duration	Monitoring	Total
2. Prevention of cars in the city (centre)	City center distribution		3	-	-	3	-	6
	Transferia/P&R		3	2	-	3	-	8
	Environmental zone		3	2	3	3	3	14
	Parking policy		3	2	3	3	-	11
	Circulation measures		3	2	-	3	3	11
	Total	3	15	8	6	15	6	53

Note: '-' = not applicable

3. Bicycle policy:

On objectives: *score Bicycle Policy category: 0 pt → 0 measures are taken; 1 pt → 1 measure is taken; 2 pt → 2-3 measures are taken, 3 pt → 4-5 measures are taken.*

I. Bicycle parking
1. Free
2. Indoor
3. New buildings (business and leisure) all have enough room reserved for the bicycle parking lots
4. Bicycle parking facilities at public transport hubs (bus stops, train stations)
5. Road sign to indicate the next big parking lot for bicycles

On definitional details score Parking lots for bicycles: 1 pt → 1 definitions, 2 pt → 2-3 definitions, 3 pt → 4-5 definitions

II. Comfort bicycle roads
1. Separation bicycle road from the main roads
2. Waiting time system on busy intersections
3. Mopeds are prohibited at the bicycle roads
4. Asphalt bicycle roads

On definitional details score Bicycle comfort: 1 pt → 1 definition, 2 pt → 2-3 definitions, 3 pt → 4 definitions

III. Bicycle highways
1. There are Bicycle highways (wide bicycle-highways)

On definitional details score Bicycle highways: 0 pt → no definition is given, or 3 pt → this definition is given

IV. Priority bicycle at intersections
1. priority to the bicycle at intersections

On definitional details score Priority bicycle at intersections: 0 pt → no definition is given, or 3 pt → this definition is given.

V. Stimulation bicycle usage
1. There is a campaign

On definitional details score Stimulation bicycle usage: 0 pt → no definition is given, or 3 pt → this definition is given

Territory: *score 1 pt → a single measure is relevant for a particular district/sections of the city, 2 pt → if within the municipality, [3 pt → the whole region – only applicable for II, III, V].*

Duration: *score 0 pt → a single measure only relevant since 2014, 1 pt → a single measure is only relevant since 2010, 2 pt → since 2005, 3 pt → already in place earlier than 2005.*

Addressees & Monitoring: *not applicable to Bicycle policy*

Table C.3: Maximum scores Bicycle policy

Category of policy measures	Individual policy measure	Objectives	Definitional details	Territory	Addresses	Duration	Monitoring	Total
3. Bicycle policy	Bicycle parking		3	2	-	3	-	8
	Comfort bicycle roads		3	3	-	3	-	9
	Bicycle highways		3	3	-	3	-	12
	Priority bicycle at intersection		3	2	-	3	-	8
	Stimulation bicycle usage		3	3	-	3	-	9
	Total	3	15	13	-	15	-	46

Note: '-' = not applicable

4. Stimulating the demand for alternative transportation

On objectives: *score "Stimulating.." category: 0 pt → 0 measures are taken; 1 pt → 1 measure is taken; 2 pt → 2-3 measures are taken, 3 pt → 4 measures are taken.*

I. Stimulation of alternative fuels consumption
   1. Subsidies for the greengas fuel stations

On definitional details score alternative fuel stations: 3 pt for having these fuel stations at place

II. Electronic transport
   1. Subsidies for the recharging stations
   2. Subsidies for the e-cars
   3. Subsidies for the e-bicycle/e-scooters
   4. Free parking during the recharge

On definitional details score electronic transport: 0 pt → only facilitating non-financially, 1 pt → only up to 1 definition, 2 pt → up to 2-3 definitions, 3 pt → 4 definitions.

III. Organisation of car usage at third parties
   1. Subsidy for the companies for the calculation of whether switching over to sustainable forms of fuel will be efficient (role of municipality – sponsor and executor)
   2. Mobility management for the company (role of municipality – thinking along)
   3. Financial benefits for the main employers of the municipality if their employees choose bicycle over car as means of transportation.
   4. Special procurement conditions for construction work (the companies that win the procurement should have clean cars at their disposal)
   5. Facilitate parking place for Green Wheels or other car sharing services

On definitional details score Organisation of car usage at third parties: 1 pt → only up to 1 definition, 2 pt → up to 2-3 definitions, 3 pt → 4-5 definitions.

IV. Municipality's stock of cars
   1. Filters on diesel cars
   2. e-cars/greengas-cars
   3. stimulate bicycle usage/discourage car usage
   4. rocurement rules for new cars

On definitional details score special attention to employers: 1 pt → only up to 1 definition, 2 pt → up to 2-3 definitions, 3 pt → 4 definitions.

Territory (except of 'municipality's stock of cars'): *score 1 pt → a single measure is relevant for a particular district/sections of the city, 2 pt → if within the municipality.*

Addressees (except of 'Alternative fuel'): *1 pt → a single measure is only relevant for a few businesses, trucks if applicable, 2 pt → if it also concerns a wide variety of businesses, 3 pt → the whole municipality (so also the citizens).*

Addressees ('municipality's stock of cars): *1 pt → a single measure is only relevant for a higher politicians, 2 pt → if it also concerns civil servants, 3 pt → also concerns waste collecting companies and/or street cleaners*

Duration: *0 pt → if a single measure only relevant since 2014, 1 pt → a single measure is only relevant since 2010, 2 pt → since 2005, 3 pt → already in place earlier than 2005.*

Monitoring: *not applicable to this category.*

Table C.4: Maximum scores on Stimulating the demand for alternative transportation

Category of policy measures	Individual policy measure	Objectives	Definitional details	Territory	Addresses	Duration	Monitoring	Total
4. Stimulating the demand for alternative transportation	Stimulation of alternative fuels consumption		3	2	-	3	-	8
	E-transport		3	2	3	3	-	11
	Organisation of car usage at third parties		3	2	3	3	-	11
	Municipality's stock of cars		3	-	3	3	-	9
	Total	3	12	6	9	12	-	42

Note: '-' = not applicable

5. Information to the public

On objectives: *score "Information to the public" category: 0 pt → 0 measures are taken; 1 pt → 1 measure is taken; 2 pt → 2-3 measures are taken, 3 pt → 4 measures are taken.*

I. School material

Definitional details: *3 pt → there are definitional details (if there is such a policy, there are common standards)*

II. Air quality policy information
1. Tips on environment friendly behaviour
2. Desk of complaint
3. AQ policy
4. AQ monitoring (links to national reporting/information)
5. AQ monitoring (local if applicable/could also be reports)
6. Information on car sharing
7. Information on the subsidies

On definitional details score information on the website: 0 pt → there is only description of environmental zone and recharging stations for electric cars, 1 pt → only up to 1-3 definitions, 2 pt → 4-6 definitions, 3 pt → more definitions.

III. Active engagement of stakeholders
1. Workshops for the public
2. Support to the interest groups that organize activities
3. Yearly awards for the cleanest company

On definitional details score 1 pt per definition.

IV. Information on wood burning policy:
1. Environmental tips
2. What you should do in case of annoyance
3. Where you can go to if you need assistance
4. Environmental issues explained
5. Health issues explained
6. Size specifications of wood

On definitional details score information provision: 1 pt → only up to 1-2 definitions, 2 pt → 3-4 definitions, 3 pt → more definitions.

Territory & Addressees*: not applicable as all are affected.*

Duration: *score 0 pt → a single measure only relevant since 2014, 1 pt → a single measure is only relevant since 2010, 2 pt → since 2005, 3 pt → already in place earlier than 2005. (If there is information on the website about earlier reports/monitoring results/etc)*

Monitoring: *not applicable.*

Table C.5: Maximum scores on Information to the public

Category of policy measures	Individual policy measure	Objectives	Definitional details	Territory	Addresses	Duration	Monitoring	Total
5. Information to the public	School material		3	-	-	3	-	6
	Air quality policy information		3	-	-	3	-	6
	Active engagement		3	-	-	3	-	6
	Wood burning information		3	-	-	3	-	6
	Total	3	12	-	-	12	-	27

Note: '-' = not applicable

6. Sensitive destination measures

On objectives score: *3 pt → there is such a policy*

Definitional details: *3 pt → there are definitional details (if there is such a policy, there are common standards)*

Addressees: *1 pt → this policy is only relevant for new buildings, 2 pt → new and old buildings which are mentioned in the national guidelines, 3 pt → if extra destinations are mentioned that are not in the national guidelines.*

Duration: *1 pt → a single measure is only relevant since 2012, 2 pt → since 2005, 3 pt → already in place earlier than 2005.*

Territory & Monitoring: not applicable.

Table C.6: Maximum scores on Sensitive destination measures

Individual policy measure	Objectives	Definitional details	Territory	Addresses	Duration	Monitoring	Total
6. Sensitive destination measures	3	3	-	3	3	-	12

Note: '-' = not applicable

Table C.7: Maximum scores on all categories

Categories of Air quality policy measures	Objectives	Definitional details	Territory	Addresses	Duration	Monitoring	Total
1. Public transport	3	18	18	3	18	-	60
2. Prevention of cars in the city (centre)	3	15	8	6	15	6	53
3. Bicycle policy	3	15	13	-	15	-	46
4. Stimulating the demand for alternative transportation	3	12	6	9	12	-	42
5. Information to the public	3	12	-	-	12	-	27
6. Sensitive destination measures	3	3	-	3	3	-	12
Total	18	75	45	21	75	6	240

Note: '-' = not applicable

APPENDIX D:

List of respondents

1. Ministry of Infrastructure and Environment
2. Association of Community Health Services
3. National Institute for the Public Health and the Environment
4. National Court of Audit
5. Consultancy firm on air quality policies and measures
6. Municipality A, policy officer 1
7. Municipality A, policy officer 2
8. Municipality A, policy officer 3
9. Municipality A, Community Health Service
10. Municipality A, provincial environmental organisation
11. Municipality A, local environmental group
12. Municipality A, local civil society organisation
13. Municipality A, local industrial company 1
14. Municipality A, local industrial company 2
15. Municipality A, alderman 1
16. Municipality A, alderman 2
17. Municipality B, policy officer 1
18. Municipality B, policy officer 2
19. Municipality B, policy officer 3
20. Municipality B, alderman
21. Municipality B, consultancy firm
22. Municipality B, consultancy firm
23. Municipality B, Community Health Service
24. Municipality C, policy officer 1
25. Municipality C, policy officer 2
26. Municipality C, alderman 1
27. Municipality C, alderman 2
28. Municipality C, Community Health Service
29. Municipality C, provincial environmental organisation
30. Municipality C, local environmental group
31. Municipality C, local civil society organisation
32. Municipality D, policy officer 1
33. Municipality D, policy officer 2
34. Municipality D, alderman 1
35. Municipality D, alderman 2

36. Municipality D, Community Health Service
37. Municipality D, local civil society organisation

A

Summaries

ENGLISH SUMMARY

This thesis aims to address some of the persisting puzzles of EU compliance research. In particular, the three puzzles that emerged from a set of national court cases on the implementation of the EU Ambient Air Quality (AAQ) directive laid down the groundwork for this thesis. First, the national court cases revealed the struggle to identify what constitutes comprehensive local EU policy implementation. EU compliance research has so far provided little guidance on how to assess what constitutes compliance with discretionary clauses such as procedural policy instruments. Secondly, the national court cases illustrated that local governments are political arenas where EU policies are being shaped on the ground. Nevertheless, EU compliance research has so far paid little attention to these local actors, focusing more on the national ones. Yet, it is also the accumulation of local actions that contributes to what extent member states make EU policies work. Hence, this local perspective is paramount to our understanding of EU compliance. And finally, the court cases revealed great intra-state implementation variety, i.e. different practices at the local level. This intra-state implementation variety has so far received little systematic attention in EU compliance research. These three puzzles resulted into the following research question: *How can we explain why Dutch municipalities differ in their implementation performance of the EU Ambient Air Quality directive?*

Chapter 2 deals with the first puzzle and analyses *how implementation performance can be conceptualised in order to go beyond the dichotomous understanding of correct compliance and to capture variation in policy implementation*. Taking guidance from national policy implementation, policy analysis, policy design, policy evaluation and policy change research, it proposes to define implementation performance as the intensity of policy outputs undertaken by implementers in response to EU policy instruments. Given the importance of open norms and procedural requirements in EU directives, the concept of implementation performance does not only have a vertical focus, i.e. aimed at comparing implementation with EU rules, but also a horizontal focus, i.e. aimed at comparing implementation practices between various implementing actors within the member states. Chapter 2 suggests to examine the intensity of policy outputs along the three dimensions of *substance*, *scope* and *effort*. The *substance* dimension relates to the central issue that is to be regulated. The second dimension concerns the *scope* of implementation: where, when and to whom does the policy task apply. The final dimension focuses on the *effort* implementers put into accomplishing a policy's goals. These dimensions are further refined with the help of ten aspects. As practical implementation can differ on these aspects, implementation performance can thus be assessed considerably more comprehensively than by employing the traditional compliance/non-compliance dichotomy and be meaningfully compared among implementers.

Based on this conceptualisation of implementation performance, Chapter 2 analyses existing research into practical implementation and reveals that current knowledge of

practical implementation of EU environmental directives is fragmented and incomplete. While the 'substance' dimension received the most attention in the literature, hardly any attention was paid to the 'scope' and 'effort' dimensions. Hence, in order to understand to what extent member states really make EU policies work, a much more granular understanding of where, how, and what is lacking in policy implementation is needed. Chapter 2 offers a conceptual framework that can facilitate such an understanding.

Chapter 3 deals with the second puzzle and analyses *the differences between Dutch municipalities in the implementation of the key procedural Article 23 of the EU AAQ directive*. It maps local implementation of EU AAQ directive in 13 Dutch cities over 10 years by using the conceptual framework proposed in Chapter 2. The analysis demonstrates that all local governments *formally complied* with the Article 23 obligation of having an AAQ plan. At the same time, it reveals various notions of *variation and over-compliance at local level*, where some local governments went beyond the regulatory minimum. Six municipalities adopted stricter norms than the EU directive, and while the national government was formally responsible for air quality monitoring and information to the public, five municipalities put their own monitoring at place and were directly communicating with citizens on the AAQ plans. Next to these differences, Chapter 3 also demonstrates *similarities* among local AAQ policy plans. Local governments sought out best practices and information platforms to reduce the uncertainty inherent to discretional obligation of designing an AAQ plan, and ended up taking the same type of measures. This information exchange was facilitated by the national air quality coordination strategy. In this case, more discretion did not result in more differences but ignited the need to cooperate between different levels of government, which effectively contributed to meeting the EU AAQ requirements. Neither the size of municipality, nor its environmental problem pressure are found to be a necessary condition for comprehensive policy measures.

Chapter 4 deals with the third puzzle and analyses *to what extent differences in Dutch local implementation of the EU AAQ directive can be attributed to political or managerial considerations.* It builds upon the analysis of AAQ local implementation in Chapter 3 and zooms in on four municipalities that formally complied with the AAQ directive but scored differently on implementation performance. The four municipalities that scored the highest/lowest were selected for an in-depth examination of the conditions for comprehensive EU implementation. The political approach is disentangled into four specific explanations: policy preferences, policy saliency, interest group pressure, and policy entrepreneurship. The management approach is also disentangled into four specific explanations: internal coordination, external coordination, policy experience and knowledge, and personnel stability. By conducting a theory-driven, comparative within-case analysis, this chapter demonstrates how observed *differences in local implementation performance* are better explained by the political approach than by the management approach. In particular, high policy saliency emerged as the main driving force behind local differences in EU implementation, which in combination with ambitious policy

preferences and entrepreneurship of both policy officers and political actors determined high implementation performance. In addition, frequent internal coordination between different policy departments within local governments contributed to high implementation performance, by enabling and strengthening the preference alignment of policy officers and political actors. Nevertheless, this chapter cautions about the extent to which political variables can explain local *compliance* with the AAQ directive. All four municipalities complied with the procedural obligation to have an AAQ management plan in the first place. Hence, similar scores on management variables could potentially explain the similarities between municipalities in terms of compliance of having an AAQ plan and meeting the limit values.

Chapter 5 also deals with the third puzzle and puts the findings of Chapter 4 in perspective. This chapter offers a reflection on the representativeness of the causal mechanism illustrated in Chapter 4. Chapter 5 systematically reviews a large number of EU local implementation studies. It reveals that the explanations of policy *preference alignment* and high *internal coordination* between different departments of local governments *also found support in other EU local implementation studies*, which focused on other member states and other EU directives. At the same time, the variables *saliency* and *policy entrepreneurship,* which were important for the causal mechanism in Chapter 4, were examined less often in these studies. Hence, more research is necessary to see whether and how these explanations play a role in other member states and implementation of other EU directives. While Chapter 4 cautions for overemphasizing the importance of political explanations for EU compliance, as all local governments were compliant, and suggests that management variables could explain the overall compliance with the directive, the literature review of Chapter 5 shows mixed findings on the explanatory power of management variables. Chapter 5 demonstrates that EU local implementation studies revealed inconsistent results on administrative capacity explanations, such as municipal size and financial resources, and their impact on local implementation. More understanding of these explanations is urgent in light of the direct consequences of how one can remedy poor implementation.

This chapter also offers new avenues for future research into EU local implementation. First, it reveals that the majority of EU local implementation studies aimed at documenting best practices. In doing so, most of the local EU implementation studies examined environmental policies. Notwithstanding the importance of environmental policy or learning from best practice cases, this chapter calls for more diversity in policies that are examined at local level, and for more attention to less performing municipalities. Second, this chapter points out that more research is required for the examination of compliance with two special procedural obligations of EU policies: local policy integration and stakeholder participation. Third, it shows that the reviewed studies did not analyse the congruence of local policies with national transposition of EU legislation, but only with EU policy. Without knowledge on how different government levels relate to each other, it becomes difficult to fully assess to what extent the different levels of government implement EU policies. Hence, Chapter 5 recommends

more attention to the multi-level character of EU implementation. Finally, this chapter reveals that most existing studies on EU local implementation are highly descriptive and exploratory. The field of EU local implementation could benefit from more explicit explanatory research designs.

The main conclusion of this thesis is that local governments differ in their implementation of EU policies. This thesis elaborates that this variety is observed within one member state and even among compliant cases. This makes the analysis of procedural obligations, which allow for highly different, while fully compliant policy responses, pertinent to our understanding on how local governments make EU policies work. This thesis reveals a leader and laggard dynamic at the local level. Some local governments even showed clear signs of over-compliance. Hence, it would be a mistake to see local governments as *only* the implementers of supra-national policy decisions. This thesis shows that local governments are political arenas where EU policies are subjected to another round of political and institutional filter.

NEDERLANDSE SAMENVATTING

Dit proefschrift beoogt bij te dragen aan een beter begrip van een aantal kernvraagstukken in EU-nalevingsonderzoek. Met name drie vraagstukken die uit een reeks internationale rechtszaken over de uitvoering van de EU-richtlijn Luchtkwaliteit naar voren kwamen, vormden de basis voor dit proefschrift. Ten eerste blijkt uit deze rechtszaken dat het moeilijk is om vast te stellen wat een alomvattende lokale EU-beleidsuitvoering is. Het EU-nalevingsonderzoek heeft tot nu toe weinig richtlijnen opgeleverd voor de beoordeling van de naleving van discretionaire clausules zoals procedurele beleidsinstrumenten. Ten tweede blijkt uit deze rechtszaken dat lokale overheden politieke arena's zijn waar het EU-beleid in de praktijk wordt vormgegeven. Echter, EU-nalevingsonderzoek heeft tot nu toe weinig aandacht besteed aan deze lokale actoren en heeft zich meer gericht op de nationale actoren. Maar uit de internationale rechtszaken blijkt dat het ook de opeenstapeling van lokale acties is die bijdraagt aan de mate waarin de lidstaten ervoor zorgen dat het EU-beleid werkt. Dit lokale perspectief is dan ook van het grootste belang voor ons begrip van de naleving van de EU-regels. Tot slot blijkt uit de rechtszaken dat er een grote verscheidenheid bestaat in de uitvoering binnen de lidstaten, d.w.z. verschillende praktijken op lokaal niveau. Deze verscheidenheid aan intra-statelijke implementatie heeft tot nu toe weinig systematische aandacht gekregen in het EU-nalevingsonderzoek. Deze drie vraagstukken hebben geleid tot de volgende onderzoeksvraag: *Hoe kunnen we verklaren waarom Nederlandse gemeenten verschillen in hun implementatieprestaties van de EU-richtlijn Luchtkwaliteit?*

Hoofdstuk 2 gaat in op het eerste vraagstuk en analyseert *hoe implementatieprestaties kunnen worden geconceptualiseerd om verder te gaan dan het tweeledige begrip van correcte naleving en om de variatie in de beleidsuitvoering vast te leggen*. Op basis van nationale beleidsimplementatie, beleidsanalyse, beleidsontwikkeling, en beleidsevaluatie onderzoeken stelt hoofdstuk 2 voor om de prestaties van de uitvoering te definiëren als de intensiteit van de beleidsoutput die de uitvoerders in reactie op de beleidsinstrumenten van de EU hebben geleverd. Gezien het belang van open normen en procedurele vereisten in EU-richtlijnen, heeft het concept van implementatieprestaties niet alleen een verticale focus, d.w.z. gericht op het vergelijken van de implementatie op lokaal niveau met de nationale regels en EU-regels, maar ook een horizontale focus, d.w.z. gericht op het vergelijken van de implementatiepraktijken tussen de verschillende uitvoerende actoren binnen de lidstaten. In hoofdstuk 2 wordt voorgesteld de intensiteit van de beleidsoutput te onderzoeken aan de hand van de drie dimensies van *inhoud*, *reikwijdte* en *inspanning*. De *inhoudelijke* dimensie heeft betrekking op de centrale kwestie die moet worden geregeld. De tweede dimensie betreft de *reikwijdte* van de uitvoering: waar, wanneer en voor wie geldt de beleidstaak. De laatste dimensie is gericht op de *inspanningen* die de uitvoerders leveren om de beleidsdoelstellingen te verwezenlijken. Deze dimensies worden verder verfijnd met behulp van tien aspecten. Aangezien de praktische uitvoering op deze aspecten kan verschillen, kunnen de prestaties

van de uitvoering dus aanzienlijk uitgebreider worden beoordeeld dan door gebruik te maken van de traditionele tweedeling tussen naleving en niet-naleving en kunnen ze op zinvolle wijze worden vergeleken tussen de uitvoerders.

Op basis van deze conceptualisering van de implementatieprestaties wordt in hoofdstuk 2 een analyse gemaakt van het bestaande onderzoek naar de praktische implementatie en wordt aangetoond dat de huidige kennis van de praktische implementatie van de EU-milieurichtlijnen versnipperd en onvolledig is. Hoewel de "inhoudelijke" dimensie de meeste aandacht krijgt in de literatuur, wordt er nauwelijks aandacht besteed aan de "reikwijdte" en "inspanning". Om te begrijpen in welke mate de lidstaten het EU-beleid daadwerkelijk uitvoeren, is dus een veel beter inzicht nodig in waar en hoe de beleidsuitvoering tekortschiet. Hoofdstuk 2 biedt een conceptueel kader dat een dergelijk begrip kan vergemakkelijken.

Hoofdstuk 3 gaat in op het tweede vraagstuk en analyseert *de verschillen tussen Nederlandse gemeenten in de uitvoering van de belangrijkste procedurele artikel 23 van de EU-richtlijn Luchtkwaliteit*. Het brengt de lokale implementatie van deze richtlijn in 13 Nederlandse steden over een periode van 10 jaar in kaart aan de hand van het in hoofdstuk 2 voorgestelde conceptuele kader. Uit de analyse blijkt dat alle lokale overheden *formeel hebben voldaan aan de verplichting* van artikel 23 om een luchtkwaliteitsplan op te stellen. Tegelijkertijd blijkt uit de analyse dat er op lokaal niveau *veel verschillen* zijn, maar ook is er een duidelijke vorm van verder gaan dan de regels het eigenlijk voorschrijven, de zogeheten *overcompliance*, waarbij sommige lokale overheden verder zijn gegaan dan het wettelijke minimum. Zes gemeenten hebben strengere normen vastgesteld dan de EU-richtlijn, en terwijl de nationale overheid formeel verantwoordelijk was voor de monitoring van de luchtkwaliteit en de voorlichting aan het publiek, hebben vijf gemeenten hun eigen monitoring ingesteld en communiceren zij rechtstreeks met de burgers over de luchtkwaliteitsplannen. Naast deze verschillen vertoont hoofdstuk 3 ook de *overeenkomsten* tussen de lokale luchtkwaliteitsplannen. Lokale overheden zochten naar *best practices* en informatie platforms om de onzekerheid te verminderen die inherent is aan de discretionaire verplichting om een luchtkwaliteitsplan op te stellen, en namen uiteindelijk hetzelfde soort maatregelen. Deze informatie-uitwisseling werd vergemakkelijkt door het Nationaal Samenwerkingsprogramma Luchtkwaliteit. In dit geval leidde meer discretie niet tot meer verschillen, maar tot de noodzaak om samen te werken tussen de verschillende overheidsniveaus, wat er effectief toe heeft bijgedragen dat aan de EU eisen werd voldaan. Noch de omvang van de gemeente, noch de druk van haar milieuproblematiek komt naar voren als een noodzakelijke voorwaarde voor alomvattende beleidsmaatregelen.

Hoofdstuk 4 gaat in op het derde vraagstuk en analyseert *in hoeverre verschillen in de Nederlandse lokale implementatie van de EU-richtlijn Luchtkwaliteit te wijten zijn aan politieke of management overwegingen*. Het bouwt voort op de analyse van de lokale implementatie in hoofdstuk 3 en zoomt in op vier gemeenten die formeel voldeden aan de richtlijn Luchtkwaliteit, maar verschillend scoorden op de implementatieprestaties. De

vier gemeenten met de hoogste/laagste scores werden geselecteerd voor een diepgaand onderzoek naar de voorwaarden voor een alomvattende EU-implementatie. De politieke benadering is opgesplitst in vier specifieke verklaringen: beleidsvoorkeuren, beleid *saliency*, belangengroepsdruk en beleidsondernemerschap. De managementaanpak is ook onderverdeeld in vier specifieke verklaringen: interne coördinatie, externe coördinatie, beleidservaring en -kennis, en personeelsstabiliteit. Een theorie gedreven, vergelijkende analyse laat zien hoe de waargenomen verschillen in lokale implementatieprestaties beter verklaard kunnen worden door de politieke benadering dan door de managementaanpak. Met name blijkt dat een hoge mate van beleid *saliency* de belangrijkste drijvende kracht is achter *de lokale verschillen in EU-implementatie*, die in combinatie met ambitieuze beleidsvoorkeuren en beleidsondernemerschap van zowel beleidsmedewerkers als politieke actoren bepalend zijn voor de hoge implementatieprestaties. Bovendien heeft de frequente interne coördinatie tussen de verschillende beleidsafdelingen binnen de lokale overheden bijgedragen tot goede implementatie prestaties, doordat zij het mogelijk heeft gemaakt dat beleidsmedewerkers en politieke actoren hun voorkeuren beter op elkaar afstemden. Toch wordt in dit hoofdstuk gewaarschuwd voor de mate waarin politieke variabelen *de lokale naleving* van de richtlijn Luchtkwaliteit kunnen verklaren. Alle vier de gemeenten voldeden aan de procedurele verplichting om in de eerste plaats een luchtkwaliteitsplan op te stellen. Gelijksoortige scores op managementvariabelen zouden dus mogelijk de overeenkomsten tussen de gemeenten kunnen verklaren wat betreft de naleving van het opstellen van een luchtkwaliteitsplan en het voldoen aan de grenswaarden.

Hoofdstuk 5 gaat ook in op het derde vraagstuk en plaatst de bevindingen van hoofdstuk 4 in perspectief. Het biedt een reflectie op de representativiteit van het in hoofdstuk 4 geïllustreerde causale mechanisme. In hoofdstuk 5 wordt systematisch een groot aantal EU lokale implementatiestudies onderzocht. Hieruit blijkt dat de verklaringen voor de *afstemming van de beleidsvoorkeuren* en de hoge *interne coördinatie* tussen de verschillende departementen van lokale overheden ook steun vinden in andere EU lokale implementatiestudies, die zich richtten op andere lidstaten en andere EU-richtlijnen. Tegelijkertijd zijn de variabelen *saliency* en beleidsondernemerschap, die belangrijk zijn voor het causale mechanisme in hoofdstuk 4, minder vaak onderzocht in deze studies. Daarom is meer onderzoek nodig om na te gaan of en hoe deze verklaringen een rol spelen in andere lidstaten en de uitvoering van andere EU-richtlijnen. Terwijl hoofdstuk 4 waarschuwt voor het te veel gewicht geven aan het belang van politieke verklaringen voor de naleving van de EU, aangezien alle lokale overheden zich aan de richtlijn hielden, en suggereert dat de managementvariabelen de algemene naleving van de richtlijn zouden kunnen verklaren, blijkt uit het systematisch literatuuroverzicht van hoofdstuk 5 dat de bevindingen over de managementvariabelen niet eenduidig zijn. In hoofdstuk 5 wordt uiteengezet dat uit EU lokale implementatiestudies blijkt dat de resultaten van deze studies over de bestuurlijke capaciteit, zoals de omvang van de gemeenten en de financiële middelen, en het effect daarvan op de lokale uitvoering, inconsistent zijn. Meer

inzicht in deze verklaringen is noodzakelijk gezien de directe gevolgen van de manier waarop een slechte uitvoering kan worden verholpen.

Dit hoofdstuk signaleert ook nieuwe paden voor toekomstig onderzoek naar de lokale implementatie van EU-beleid. Ten eerste blijkt dat het merendeel van de EU lokale implementatiestudies gericht is op het documenteren van *best practices*. Daarbij is in de meeste studies gekeken naar het milieubeleid. Niettegenstaande het belang van milieubeleid of het leren van *best practices*, roept dit hoofdstuk op tot meer diversiteit in beleid dat op lokaal niveau wordt onderzocht, en tot meer aandacht voor minder goed presterende gemeenten. Ten tweede wordt er in dit hoofdstuk op gewezen dat meer onderzoek nodig is om na te gaan of aan twee bijzondere procedurele verplichtingen van het EU-beleid wordt voldaan: de integratie van EU-beleid op lokaal niveau en de participatie van belanghebbenden op lokaal niveau. Ten derde toont het aan dat in de huidige studies niet is geanalyseerd of het lokale beleid van de lidstaten in overeenstemming is met de omzetting van EU-wetgeving, maar alleen met het beleid van de EU. Zonder kennis over hoe de verschillende overheidsniveaus zich tot elkaar verhouden, wordt het moeilijk om volledig in te schatten in welke mate de verschillende bestuursniveaus het EU-beleid uitvoeren. Daarom wordt in hoofdstuk 5 aanbevolen meer aandacht te besteden aan het *multi-level* karakter van de EU-uitvoering. Ten slotte blijkt uit dit hoofdstuk dat de meeste bestaande EU lokale implementatiestudies zeer beschrijvend en verkennend zijn. Het onderzoeksgebied van de EU lokale uitvoering zou baat kunnen hebben bij meer expliciete verklarende onderzoeksopzetten.

De belangrijkste conclusie van dit proefschrift is dat lokale overheden belangrijke verschillen vertonen in de uitvoering van EU-beleid. Dit proefschrift maakt inzichtelijk dat deze verschillen worden waargenomen binnen één lidstaat en zelfs tussen de gemeenten die aan de eisen voldoen. Dit maakt de analyse van de procedurele verplichtingen, die het mogelijk maken om zeer uiteenlopende, maar volledig conforme beleidsuitvoering te formuleren, relevant voor ons begrip van de manier waarop lokale overheden het EU-beleid vormgeven in de praktijk. Dit proefschrift toont tevens aan dat sommige gemeenten meer doen dan het absolute wettelijke minimum, en dus hun rol in het oplossen van grensoverschrijdende problemen zeer proactief en serieus nemen. Het zou dan ook een vergissing zijn om de lokale overheden alleen te zien als de uitvoerders van supranationale beleidsbeslissingen. Dit proefschrift illustreert dat lokale overheden politieke arena's zijn waar het EU-beleid opnieuw aan een politieke en institutionele filtering wordt onderworpen.

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About the author

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